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The **OIL WEEKLY** and The **COMPOSITE CATALOG** for the drilling-producing-pipeline industry

PETROLEUM REFINER and The **REFINERY CATALOG** for the refining-natural gasoline industry

LOOKING AHEAD
. . . with the Editor

MARBLE torpedoes, a new method of cleaning wells where production had declined as a result of gyp, paraffin, cement or other encrustations, are proving their worth.

More than 400 wells have been treated during the past year with agate torpedoes or "marble shot," and the results have been gratifying, with practically all wells showing an increase in production.

No mechanical changes have been made in the tool although it is planned to use seamless aluminum tubing for the explosive container. Because of the materials shortage, the containers now are made of tin.

Although interest in the marble torpedoes was primarily due its ability to thoroughly clean the face of the well bore by removing congested solids and permitting the well to respond to its full capacity, new uses and rather surprising results have been reported during the past year.

A detailed description of the tool and its application will be given by Anthony Gibbon, staff writer, in an article soon to be published.

THE OIL MAN'S CALENDAR

OCT. 1- 2	American Association of Drilling Contractors, Skirvin Hotel, Oklahoma, City.
9	FPC Gas Hearings, Room 609, County Court House, Oklahoma City.
15-17	Independent Petroleum Association of America, Membership Meeting, Mayo Hotel, Tulsa.
24-25	American Gas Association Annual Meeting, New York, Engineering Societies Building.
30	FPC Gas Hearings, Room 245, Post Office Building, New Orleans.
NOV. 12-15	American Petroleum Institute, Silver Jubilee Meeting, Stevens Hotel, Chicago.
27	FPC Gas Hearings, Dallas.

The OIL WEEKLY

ENGINEERING • NEWS • STATISTICS

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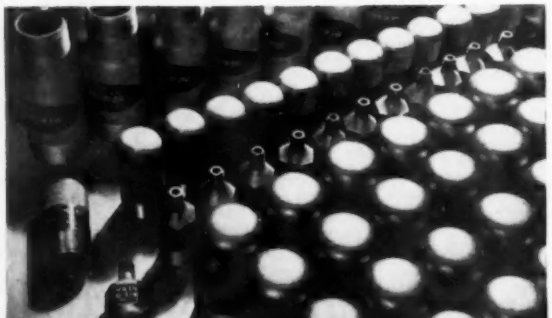

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The Changing Panorama

When Do We Start Counting?

THE shooting appears to be over, but the boys—and business—who are "in" for the duration plus six months had better not start counting the days.

That's because the end isn't official until Congress adopts a resolution proclaiming the termination of the war or the emergency.

And from the way President Truman looks at it, the legislative branch would act most unwisely if they took such a step now. Such a resolution would, he said in his message, "automatically cause the death of many war powers and wartime agencies before we are ready" because the government would revert to its pre-existing status six months after its passage. This, the President says, "would cause great confusion and chaos in the government."

So he wants Congress to leave the wartime emergency powers in his hands indefinitely. How long he would continue to exercise war powers nobody knows.

However, it is pretty certain that confusion akin to chaos will result from this attempt to govern, as the *Wall Street Journal* phrases it, "under the legal fiction that the war goes on."

People generally would applaud Washington's positive action in this matter. Prompt termination may appear drastic to those bureaucrats who have become accustomed to the "emergency" way of doing things, but their exit can begin now just about as well as a few months from now. Certainly we do not want our governmental structure remodeled by such devious and evasive means.

All this is apart from the duty we owe the men whose understanding when they donned the uniform was that they'd be "out" within six months after hostilities ended. They've done their job and a nation should do no less than carry out its agreement with them—or bust a trace trying.

Meeting the Shortage Of Trained Engineers

SUGGESTIONS for meeting the problem of the wartime paucity of young engineering graduates have been made by E. A. Holbrook, dean of the schools of engineering and mines of the University of Pittsburgh in *Mining and Metallurgy* as follows:

1. Mining, metallurgy and petroleum companies should urge their most promising former employes who are returned veterans to complete their engineering courses in college. Future employment might be assured.

2. Larger companies might institute some type of in-company training for promising technical men. This activity, in cooperation with engineering schools, might appeal to the fellow who feels too old to return to college.

3. Industry should urge the state to provide, at public expense, schools of the technical institute type which would give intensive training on the college level for particular positions. War training courses have proven that intelligent men, trained for a specialized job, can fill many specialized technical needs.

Industries cannot, for a few years at least, go to engineering schools and pick their men "who will be graduated in June." There is no college crop to be harvested for several years due to war's inroads.

Postwar Labor Policy Is Subject of Study

A SURVEY of opinion on postwar labor policy recently concluded by The Bureau of National Affairs gives these interesting statistics on what some people are thinking about the labor situation in the United States:

Answers to questions show that 85 percent of all those replying think an agency to mediate postwar labor disputes is desirable.

They show that 70 percent of those replying believe such an agency will be necessary.

They show that 67 percent want a federal agency to mediate disputes.

They show that 52 percent believe in a strengthened Conciliation Service; but only 33 percent believe that the Conciliation Service should be empowered to settle disputes by final order, and only 25 percent think the Conciliation Service should have power to regulate wages by formula.

They show that 84 percent believe ways and means for creating an agency and giving it instructions on procedure should be developed by a representative conference of labor and management convoked by governmental request.

They show considerable difference of opinion on desirable rules to guide such an agency, but there is general agreement, expressed or implied, that the agency should be impartial.

They show that a majority—59 percent—approve in a general way the work the War Labor Board has done.

Six hundred answers were received from representatives of business, labor unions, the legal profession, and those who professionally advise on industrial relations.

A half billion cans for vacuum packed coffee before the war required 247 tons of tin. The same number of cans can be made in 1945 with 70 tons of tin. The reason: technical advances which make tin go much farther than it went before the war, which is a welcome development in view of the continuing shortage of tin ore supplies for the United States.

Good Will Through Better Gardens

A TOTAL of 2,600,000 square feet of home gardens were cultivated by members of Shell Oil Company's Grow-A-Garden Club this year, with more than 6000 employes participating.

A "Country Fair in the Clouds" harvest show was held on the 64th floor of the RCA Building, in New York, and prizes were awarded in the national canned goods contest. Entries were received from 33 states. Three grand prizes were awarded.

The Grow-A-Garden Club sponsored by Shell is in support of the government's food-growing program. The club was organized in 1942. The 1945 program has included literature, helps, leaflets, posters, garden booklets, circulation of garden films, meetings through Shell areas, monthly local garden club publications at 18 locations from Maine to Texas, unused company land made available for gardening, and in many localities where needed, water piped in, with surplus land, over and above the needs of employes, being made available to members of the general public.

Aside from the very practical benefits to club members in the way of well-filled larders this winter, the whole program looks like a splendid good-will builder for Shell, a well-founded public relations activity, and one that is sure to pay dividends.

Record Experiences For Future Needs

VARIOUS PAW district offices, as well as headquarters in Washington, are writing a history of the methods and accomplishments of PAW during the war. This is a constructive move, but it does not go quite far enough, in our opinion.

THE OIL WEEKLY would like to suggest to the PAW that each district, along with its history, make recommendations to headquarters as to procedure to be followed by the government and the oil industry in the event of another war.

Such recommendations can now be written in the light of the experience of the past four years, taking advantage of such mistakes as have been made and emphasizing those methods which proved eminently successful. Headquarters could then take these district recommendations and coordinate them, giving to the government and the industry in such coordination a blue print which could be quickly put into action should another war come.

Such recommendations, made while the subject is fresh, should prove invaluable.

Youngstown SALUTES

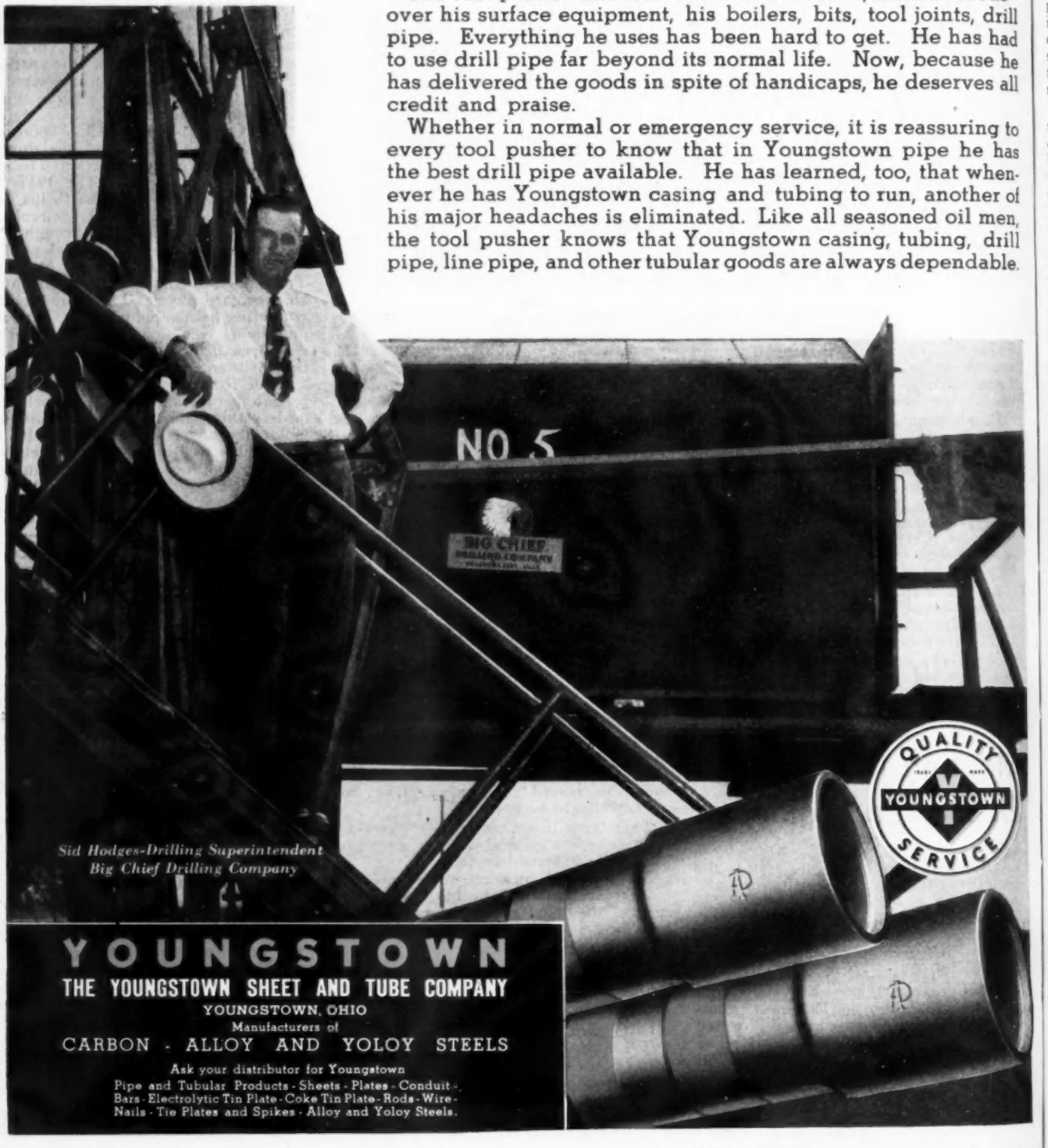
THE TOOL PUSHERS

YOUNGSTOWN salutes the tool pushers for their war accomplishment.

For three years or more they have carried the responsibility for drilling wells to produce more oil for the armies and navies and war industries of America and her allies.

The tool pusher has had not one headache, but hundreds-- over his surface equipment, his boilers, bits, tool joints, drill pipe. Everything he uses has been hard to get. He has had to use drill pipe far beyond its normal life. Now, because he has delivered the goods in spite of handicaps, he deserves all credit and praise.

Whether in normal or emergency service, it is reassuring to every tool pusher to know that in Youngstown pipe he has the best drill pipe available. He has learned, too, that whenever he has Youngstown casing and tubing to run, another of his major headaches is eliminated. Like all seasoned oil men, the tool pusher knows that Youngstown casing, tubing, drill pipe, line pipe, and other tubular goods are always dependable.



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Storing Foreign Oil in U. S. Fields Impractical

By RICHARD V. HUGHES, Director of Production Research,
The Pennsylvania Grade Crude Oil Association

THE article, "Foreign Oil Can Be U. S. Asset" which appeared in the August 20 issue of THE OIL WEEKLY has created a good deal of comment among the oil industry. It reminds them of a prediction for 1945 made last December in one of the more popular magazines by columnist Drew Pearson in which he stated that we shall actually import oil from Russia and store it in depleted, non-porous oil wells of Pennsylvania.

It is proposed in the present article that our government obtain by lend-lease or by other means a total of 5 billion barrels of crude oil from Russia and Great Britain to be stored in our depleted fields for any future emergencies. The crude oil would be transported through the Big and Little Inch lines from the east coast to the fields in the southwest where it would be forced into selected reservoir sands under pressure, using natural gas or nitrogen that it might be recovered again by natural flowing methods. It is stated that a survey of depleted fields in this country doubtless will reveal ample storage space and that engineers maintain that it is quite feasible to return crude oil into depleted underground storage.

Much comment has been heard in the oil industry concerning an article in the August 20 issue of THE OIL WEEKLY, written by Oscar Hatcher, Geologist with Helmerich & Payne, Inc., proposing the storage of imported oil in U. S. fields for use in future emergencies. Richard V. Hughes, director of production research, Pennsylvania Grade Crude Oil Association, takes the opposite view in an article appearing in the current issue of The Producers Monthly, declaring that such a plan would be impractical. Because of the interest created by Geologist Hatcher's article we present here the full text of Hughes' reply. THE EDITOR.

Preparedness Urged

The only purpose for storing the proposed 5 billion barrels of crude oil is to insure an ample supply to our country in the event of another war. Although we all hope that another war with its world-wide destruction will not occur, all agree that our country should stand prepared for any eventuality. And all will agree that an ample supply of petroleum is one of the most important requisites. What amount may be considered as an ample supply and how it should be provided are questions of interest to every oil operator. Both are subject to wide differences of opinion. The following comments are an attempt to summarize some of the opinions that have been expressed with respect to the above proposal:

1. Crude oil can be forced into reservoir sands for storage purposes. It has been reported that approximately 825,000 barrels of California crudes were forced into reservoir sands of the Brea Canyon and Lompoc fields for storage purposes prior to 1942 by one of the larger California companies. Early during 1942 approximately 180,000 barrels were withdrawn, but no data are available as to what has happened to the remainder. A total of nearly 4,500,000 barrels of butane had been injected into reservoir sands in Oklahoma prior to 1942 on six different projects. No attempts had been made to determine the percentages recoverable, although one of the companies expressed the opinion that 75 percent could be recovered. The Anglo-Iranian Oil Company returned 30 million barrels of excess refinery products to the reservoir sands in its Near East fields between 1929 and 1936.

Transportation Problem

2. Transportation of the crude from the eastern coast to fields in the southwest would be a big problem. It would require nearly 45 years to transport 5 billion barrels of crude oil through the Big Inch line, assuming its capacity to remain the same as the average since completion. Actually, the capacity would be considerably lower as the imported crudes would be low-gravity oils.

3. One can only wonder where the depleted fields available for such huge storage might be located. It is questionable whether there are any depleted fields of major size in the United States. It all depends upon the definition of the word depleted. The Bradford field is 75 years old and still producing 30,000 barrels of crude daily. It may have been considered depleted 30 years ago but it has produced approximately 250 million barrels of premium quality crude since that time. It is doubtful if over 33 percent of the crude originally in place in the average field is recovered by primary means. If depleted fields are those which have produced their economic primary oil and if on the average approximately 66 percent of the oil originally in place remains as residual oil, such fields should not be considered depleted and the owner would expect to be compensated accordingly by the government if their leases were used for storage purposes. The use cost of any selected reservoir would be one of the most expensive items on a per barrel basis. There may be as much as 100 billion barrels of oil in our presently known discovered fields which has not or will not be produced under primary recovery methods. Nevertheless, it has a potential value to the owner and to the nation, for much of it could be produced in the future by secondary recovery methods. No owner of a lease or field having secondary recovery possibilities would permit his sands to become contaminated with the type of low-gravity crudes that would have to be imported without a justifiably high compensation from the government.

Gas Rates

4. It should prove not too difficult to provide all the necessary gas to be injected with the crude in order to insure its flowing when the wells are opened to production. Nevertheless, regardless of the amount of gas that might be injected with the crude withdrawal, rates could not be excessive without serious loss in recovery. An efficient yearly withdrawal rate would prove disappointingly small. The storage proposal amounts to nothing more than to increase our recoverable reserves by 5 billion barrels. The resultant maximum efficient recovery for the nation probably could not be increased by more than 30 percent. However, the same amount of gas might be of greater national value if it could be made available for secondary recovery operations. The Big Inch lines might be better utilized to carry it to the east where it is badly needed for such purposes.

5. Refineries would have to be so designed and equipped that they could be converted to handle the imported crude when called upon by our government. It would take some farsighted planning for no one today can predict the types or quantities of petroleum products that might be needed in any future emergency. High octane gasoline and heavy fuels might be only minor products.

6. Such a proposal would put the government in the oil business in a big way. On the assumption that our present proven reserves might be maintained for years to come, our government would own and have absolute control over 1/5 of our producible reserves. No doubt the Army, Navy, and Department of Interior would each want control. Our legislative branch certainly would want to have a hand in any thing of such political importance. Would not even the states squabble over the selection of storage sites? Industry has never wanted our government in the oil business.

7. It is doubtful that any foreign country would let one of its most valuable natural resources be exploited and stored in another country solely to meet any possible future war emergency. Certainly Russia would not agree to any such proposal, since it appears set on strengthening its own petroleum supply problems at the expense of Polish and Roumanian fields and wants a hand in Near East reserves. None of the South American countries with the possible exception of Venezuela could supply oil for such a storage project. Venezuela would have

■ CONTINUED ON PAGE 51

How to Take Full Advantage of Your

Depletion Allowance

By MARION F. MUNRO, Sun Oil Company

TABLE 1

EXPLANATION	"A" Lease	"B" Lease	"C" Lease	"D" Lease	Total	
1. Income	$ 60,000	$ 40,000	$ 30,000	$20,000	$150,000	
2. Expense other than depletion	10,000	12,000	20,000	25,000	67,000	
3. Profit before depletion and tax	$ 50,000	$ 28,000	$ 10,000	—($5,000)	$ 83,000	
4. Cost or book depletion	500	8,000	1,000	500	10,000	
5. Net book profit before tax	**$ 49,500**	**$20,000**	**$ 9,000**	**—($5,500)**	**$ 73,000**	
						$ 73,000
TAX COMPUTATION						
Line 3 above	$ 50,000	$ 28,000	$ 10,000	—($5,000)	$ 83,000	
Less: (a) 27½% of gross or	**16,500**	**11,000**	8,250	5,500	27,500	
(b) 50% of Net or	25,000	14,000	**5,000**	.....	5,000	
(c) Book or Cost	500	8,000	1,000	**500**	500	
Taxable profit	$ 33,500	$ 17,000	$ 5,000	—($5,500)	$ 50,000	
6. Tax at 40%	.....	.....	.....	.....	.....	$ 20,000
7. Net estimated profit for year	.....	.....	.....	.....	.....	**$ 53,000**

TABLE 2

Operator's Position If Well Drilled on "A" Lease

EXPLANATION	"A" Lease	"B" Lease	"C" Lease	"D" Lease	Total	
1. Income	$ 60,000	$ 40,000	$ 30,000	$ 20,000	$150,000	
2. Expense other than depletion	25,000	12,000	20,000	40,000	97,000	
3. Profit before depletion and tax	$ 35,000	$ 28,000	$ 10,000	—($20,000)	$ 53,000	
4. Book or cost depletion	500	8,000	1,000	500	10,000	
5. Net book profit before tax	**$ 34,500**	**$ 20,000**	**$ 9,000**	**—($25,500)**	**$43,000**	
						$ 43,000
TAX COMPUTATION						
Line 3 above	$ 35,000	$ 28,000	$ 10,000	—($20,000)	$ 53,000	
Less: (a) 27½% of gross or	**16,500**	**11,000**	8,250	5,500	27,500	
(b) 50% of net or	17,500	14,000	**5,000**	.....	5,000	
(c) Book or Cost	500	8,000	1,000	**500**	500	
Taxable profit	$ 18,500	$ 17,000	$ 5,000	—($20,500)	$ 20,000	
6. Tax at 40%	.....	.....	.....	.....	.....	$ 8,000
7. Net estimated profit for year	.....	.....	.....	.....	.....	**$ 35,000**

TABLE 3

Operator's Position If Well Drilled on "B" Lease

EXPLANATION	"A" Lease	"B" Lease	"C" Lease	"D" Lease	Total	
1. Income	$ 60,000	$ 40,000	$ 30,000	$ 20,000	$150,000	
2. Expense other than depletion	10,000	27,000	20,000	40,000	97,000	
3. Profit before depletion and tax	$ 50,000	$ 13,000	$ 10,000	—($20,000)	$ 53,000	
4. Cost or book depletion	500	8,000	1,000	500	10,000	
5. Net book profit before tax	**$ 49,500**	**$ 5,000**	**$ 9,000**	**—($20,500)**	**$ 43,000**	
						$ 43,000
TAX COMPUTATION						
Line 3 above	$ 50,000	$ 13,000	$ 10,000	—($20,000)	$ 53,000	
Less: (a) 27½% of gross or	16,500	11,000	8,250	5,500	16,500	
(b) 50% of net or	25,000	6,500	**5,000**	.....	5,000	
(c) Book or Cost	500	**8,000**	1,000	**500**	8,500	
Net taxable income	$ 33,500	$ 5,000	$ 5,000	—($20,500)	$ 23,000	
6. Tax at 40%	.....	.....	.....	.....	.....	$ 9,200
7. Net estimated profit for year	.....	.....	.....	.....	.....	**$33,800**

20 percent saving in taxes may be the difference between being 'liquid' and in 'liquidation'

SOME oil and gas operators become especially aware of their income tax liability just prior to the close of their tax year, which in many instances is too late to secure the maximum depletion allowance for that particular year.

Tax records must be kept on an annual basis, but since the oil in place in the ground is not considered as "inventory," in the usual sense, the actual operations can hardly be divided into annual periods. However, the depletion allowance by separate properties must be computed for each taxable year and the result for each period stands on its own. Such being the case, the tax accountant and operator should review the status of each separate property as far in advance as possible, making revisions as soon as estimates become facts and as additional information is secured, if maximum depletion allowances are to be obtained.

Now that hostilities have ceased and after a period for adjustments and reconversions, the operating uncertainties should be reduced, thus allowing better estimates and subsequently obtaining the highest efficiency possible which probably will be a "must" for most operators in the postwar era, if operations are to be continued successfully.

Example Cited

The principle of the best tax results for each separate property is applicable to all operators, but for illustrative purposes assume that "X" Corporation, the operator, is on a calendar year and accrual basis and has elected to expense his intangible development costs for federal income tax purposes. Further, that all taxable income is subject to the 40 percent rate even though the effect of smaller rates on taxable income of less than $50,000 would increase the actual tax savings. The usual procedure is for the tax man to estimate, toward the close of the year, what the total taxable income will be, if any, and then the operator makes a decision as to addi-

THE author holds a B.B.A. degree from Southern Methodist University and is a Certified Public Accountant. He has been employed as an accountant and auditor by Sun Oil Company for 17 years, and also serves as a professor of Federal Income Tax and Oil Accounting at Dallas College, which is the night school branch of S. M. U. He is a past president of the Petroleum Accountants Society of Dallas.

tional wells in order to absorb the estimated taxable income, thereby reducing the tax liability.

The important feature which some operators overlook is the individual property on which the well or wells should be drilled. A well is being used in illustration because it usually represents substantial amounts of expenditures; however, the principle applies to any item which will be expensed for tax purposes, such as reworking operations, acidizing, payroll labor, supplies, repairs, additional depreciation occasioned by additional investment, etc.

TABLE 4

Operator's Position If Well Drilled on "C" Lease

EXPLANATION	"A" Lease	"B" Lease	"C" Lease	"D" Lease	Total	
1. Income	$ 60,000	$ 40,000	$ 30,000	$ 20,000	$150,000	
2. Expense other than depletion	10,000	12,000	35,000	40,000	97,000	
3. Profit before depletion and tax	$ 50,000	$ 28,000	—($5,000)	—($20,000)	$ 53,000	
4. Cost or book depletion	500	8,000	1,000	500	10,000	
5. Net book profit before tax	**$ 49,500**	**$ 20,000**	**—($6,000)**	**—($20,500)**	**$ 43,000**	
TAX COMPUTATION						$ 43,000
Line 3 above	$ 50,000	$ 28,000	—($5,000)	—($20,000)	$ 53,000	
Less: (a) 27½% of gross or	**16,500**	**11,000**	8,250	5,500	27,500	
(b) 50% of net or	25,000	4,000	.....	.....	.....	
(c) Cost or Book	500	8,000	**1,000**	**500**	1,500	
Net taxable profit	.....	.....	.....	.....	$ 24,000	
6. Tax at 40%	.....	.....	.....	.....	.....	$ 9,600
7. Net estimate profit for year	.....	.....	.....	.....	.....	**$ 33,400**

development costs would be a tax deduction in full—leaving $20,000 of taxable income and a tax liability of $8000 ($20,000 times 40 percent.) The depletion allowance of $33,000, as shown in Illustration 1, would not be affected, as $500 still would be allowable as cost depletion (under certain conditions) for "D" property, and the other properties would not be disturbed; thus, by drilling two additional wells, net profit for the year would be $35,000, or in other words, the intangible development cost of the two wells would be $30,000 gross and $18,000 net to the operator.

Other leases must be drilled, however, so the operator decides that one well should be drilled on "D" property and the other on either "A," "B" or "C," and wants to know the cost to him in each instance.

Table 2 discloses the operator's position if the second well is drilled on "A" property. The tax accountant's estimate if the well is drilled on "B" property is shown in Table 3.

It has been assumed that book or cost depletion for each lease is still allowable for tax purposes; however, if such costs have been recovered in prior years, the variations would be even larger. As in Table 3 the depletion allowance would be reduced by $1500 ($8000 cost to $6500 or 50 percent of net), thereby increasing the tax by $600—leaving the operator with a net profit for the year of $33,200.

If the well is drilled on Tract "C", the experience could be forecast as in Table 4.

Recapitulation of data is shown in Table 5.

Having firmly established the principle, the possibilities of refinements in tax planning bring to mind (1) the

• CONTINUED ON PAGE 51

TABLE 5

Recapitulation of Data in Tables 1, 2, 3 and 4

EXPLANATION	Estimated Gross Income	Estimated Income Tax	Estimated Net Income	Estimated Intangible Cost Per Well
If no additional Well is Drilled	$ 73,000	$ 20,000	$ 53,000	$.....
If both Wells on "D" and/or a non-producing Lease or Leases	43,000	8,000	35,000	9,000
If one on "D" and one on "A"	43,000	8,000	35,000	9,000
If one on "D" and one on "B"	43,000	9,200	33,800	9,600
Same as above except Cost Depletion not allowable	43,000	9,800	33,200	9,900
If one on "D" and one on "C"	43,000	9,600	33,400	9,800

Continuing the assumptions, the "X" Corporation owns four producing leases and numerous non-producing properties, and after closing the books for August, the tax accountant prepares figures showing the total estimated annual experience as shown in Table 1 (with the exception that throughout the illustrations income and expense items other than those applicable to producing leases have been deleted for clarity.)

Under the present tax laws, the estimated taxable profit of $50,000 would result in paying federal income tax of $20,000, so the operator decided to drill two additional holes on which his intangible development costs during the current tax year will approximate $15,000 each, or a total of $30,000. In order to reduce the complications, also assume that both wells will be completed on December 31 so that no additional income from production is involved. In actual practice, the additonal earnings from new wells for the remainder of the taxable year may be substantial and these should be included in the computations.

The operator has one additional location to be drilled on Lease "A" and at least two more locations on each of the other three producing leases.

Since "D" property has been estimated as sustaining a loss for the year, it can be seen that possibly for the best tax results both wells should be drilled on this lease or on a non-producing lease or leases, as the intangible

TABLE 6

Example of Timing Operating Expenditures

	1945	1946	Total Two Years
I. ACIDIZING DONE IN DECEMBER			
1. Income	$ 25,000	$ 40,000	$ 65,000
2. Expense	24,000	12,000	36,000
3. Profit before tax	**$ 1,000**	**$ 28,000**	**$ 29,000**
4. Less: Tax (See below)			7,000
5. Net profit			**$ 22,000**
TAX COMPUTATION			
Line 3 above	$ 1,000	$ 28,000	$ 29,000
27½% of gross or	6,875	**11,000**	11,000
50% of net	**500**	14,000	500
Taxable income	$ 500	17,000	17,500
Tax at 40%	.....	.....	7,000
II. ACIDIZING DONE IN JANUARY			
1. Income	$ 25,000	$ 40,000	$ 65,000
2. Expense	20,000	16,000	36,000
3. Profit before tax	**$ 5,000**	**$ 24,000**	$ 29,000
4. Less: Tax (See below)	.....	.....	6,200
5. Net profit	.....	.....	**$ 22,800**
TAX COMPUTATION			
Line 3 above	$ 5,000	$ 24,000	$ 29,000
27½% of gross or	6,875	**11,000**	11,000
50% of net	**2,500**	12,000	**2,500**
Taxable income	$ 2,500	$ 13,000	$ 15,500
Tax at 40%	.....	.....	6,200

Planning Foreign Geophysical Parties

Part 2

By C. H. DRESBACH, Geophysical Supervisor and Assistant Chief Geologist, Western Gulf Oil Company

Moving seismograph camp in Latin America.

SPECIAL conditions encountered in much foreign geophysical work make it necessary to consider other factors than topography, climate, living conditions, health of crew, languages, quality of crew, which were discussed in Part 1 (published in THE OIL WEEKLY, September 17, 1945). These additional factors include method of transportation, equipment design, supply organization and program.

The required method of transportation of geophysical instruments and equipment strongly influence their design. Since this last is a matter of individual company policy, it is not discussed here except as a by-product of the determining conditions. Transportation methods used abroad are the same as those for domestic use, the chief difference being that a much greater proportion of foreign work is conducted in isolated locations.

Accustomed as is the average American to the all-weather highways of the States, it is difficult for him to realize the very primitive transportation conditions still existing in many of the foreign areas where oil exploration work is conducted. Even the old-time field man who has battled the swamps of the Mississippi Delta or the sand hills of West Texas is likely to find unaccustomed conditions and tougher situations. Moreover, he has to tackle them largely on his own initiative and without the assistance of the home office.

Transportation Methods

Operations will be conducted by one or a combination of the following transportation methods: (1) water, (2) amphibious, (3) automotive, (4) animal, (5) portage. Still in the future but well within the bounds of possibility are the conduct of certain types of geophysical surveys by the use of helicopters or low flying, slow-speed airplanes.

(1) Water operations, outside of the fact that they are in a foreign area, may be rather similar to those in the United States, particularly the Mississippi Delta. The experienced Louisiana Gulf Coast operator has already met most of the technical problems associated with water work.

(2) Amphibious operations, and especially the type usually conducted with marsh buggies of various sorts, are also of the same general character as those in the States, especially in the Mississippi Delta and the Florida Everglades. However, an additional obstacle that frequently must be overcome in tropical and semi-tropical areas is the luxuriant, often impenetrable vegetation. Particularly in swampy areas the character of such growth is almost unimaginable to the inexperienced. The amphibious vehicle developed for the Army and Navy, such as "ducks," "alligators," "weasels," etc., should prove of great assistance in much exploratory work.

(3) Automotive equipment of various types is the basis for most foreign geophysical operations, as it is for domestic. Roads are usually few, trails scarce, and most of the work is done cross-country, yet the American-made cars and trucks stand up under the excessive punishment surprisingly well.

An excellent object lesson in the requirements of sturdy transportation units was afforded by a certain European electrical party which came to eastern Venezuela to conduct some experimental surveys in the same area over which American seismograph parties have been operating for several years. With their equipment carried by light European cars and trucks, only about two months of the rough, jolting usage were required to put their transportation units completely out of commission.

The question of the type of drive is usually decided by the companies' experience with analagous conditions. Multiple-axle and all-wheel drives are a necessity or a great help in many places. Balanced against that may be the difficulty or delay in obtaining repair parts in many areas, particularly under present conditions. In anywhere near normal times the larger United States auto and truck manufacturers maintain excellent service in the metropolitan areas of most countries. Even so, access to them may be very slow at times.

Seismic operations, and particularly the reflection method, normally require the use of drilled shot holes. Some American manufacturers have developed the truck-transported shot hole drill to a state of perfection unapproached by foreign truck builders. Being much the heaviest automotive unit, the drill trucks are the most likely to require extra driving mechanisms that may range all the way to a crawler type tread. Incidentally, in some desert or semi-desert locations shot holes were in many cases left for water wells for the natives.

Use of Jeeps

Considerable interest and discussion has centered about the utilization of "jeeps" for operations in tough areas. Their ability to operate under conditions beyond the capacities of any other motor-driven wheeled vehicle undoubtedly creates a very useful place for them. On the other hand, their extremely hard riding qualities find little favor with personnel for long continued, routine use. Also, the general and local availability of replacement parts represents another problem for commercial users.

Perhaps the truck manufacturers will develop a postwar vehicle based on their jeep experience that will incorporate all of its well known advantages and eliminate the most serious objections. On this subject of special carriers for difficult operations and terrain, there may be added the rather obvious but frequently-overlooked observation that where feasible it is often decidedly more economical and efficient to use the specialized vehicle only on the job as required and to have conventional and/or lighter carriers available for personnel transportation to and from the location.

Because automotive equipment and installations are in general so standard with most exploration companies, further comment is not believed required except to add that the installation of a good winch on practically every piece of equipment is one of the best investments that can be made.

(4) Animal transported equipment is used fairly frequently in areas too difficult for automotive equipment. It is the writer's opinion that it probably could be advantageously used at least in supplementary operations more frequently than is ordinarily done. Carts or wagons may be used if the country is fairly open or if passable trails already exist or can be cut without too much difficulty. Horses, mules, burros or oxen may be used to pull them. In a tropical environment, mules withstand climatic conditions and poor forage better than horses and are much faster than oxen. Moderately open and developed localities in Trinidad, Cuba and the Western Venezuela llanos are known areas in which mule carts have been used for transporting geophysical instruments, supplies and camp equipment.

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The design of geophysical instruments to be transported in carts ordinarily is little different from conventional truck-carried apparatus. Provisions to absorb the jolting due to the rough terrain usually traversed and the lack of springs in the carts is the main consideration. Portable drills are made in sizes transportable in carts. They may be disassembled readily into parts of a size that can be handled without too much difficulty. Using 1-inch drill rods and 3 to 4-inch bits, they can produce 100-foot holes in reasonable time under ordinary drilling conditions.

Developing Records

Special provisions for developing seismograph records must be made when the conventional truck dark room is not available. The usual equipment consists of a portable case in which are fitted four covered cans containing the developer, fixer and two wash waters. This case is covered by a dark bag fitted with arm holes. All processes are done by feel, supplemented by timing. Under average field conditions where no temperature control is possible, this requires quite a knack. However, it is one routine operation for which an intelligent native can ordinarily be trained.

There are many prospective areas where topography, terrain conditions, and vegetation are too difficult for the use of animal drawn vehicles, but where they are not so extreme as to require porters. In such cases, which are encountered particularly in many of the Latin-American countries, operations may be conducted with surprising speed and efficiency by the use of animal packed equipment. Although horses or burros are sometimes used, mules are ordinarily employed; for, as previously stated, mules withstand difficult conditions better than horses. While burros have great resistance, due to their short legs they mire in the mud more easily than mules and are more likely to lose their footing while crossing rivers. Their load capacity and speed are also less.

A few fundamental principles govern the design of any equipment to be transported by pack mules (or other animals). The total load per animal usually should not exceed 200 pounds. This total ordinarily must be fairly evenly divided into equal loads on each side. Moreover, each of these should be of such a size and shape as will best be carried by the animal, and also be adaptable to quick and convenient packing and unpacking.

It is with difficulty that one single, heavy load can be satisfactorily packed on one animal. The container cases must be adapted to the customs of the native animal handlers in the prospective country, for while it may appear far-fetched to design geophysical equipment to a size acceptable to some unknown, remote and obscure "mule-skinner" some thousands of miles away, the hard fact nevertheless remains that eventually native mule packers will have to be depended on to transport valuable and delicate instruments.

In parts of Mexico, for example, aparejos or pack-saddles are ordinarily not used; instead, two thick pads laid across the animal's back receive the loads. These are fastened by separate cinches and ride high on the animal's sides. The carrying cases are thus tilted at an angle of about 30 degrees from the vertical. This seemingly unimportant factor means that all equipment inside the carrying case must fit tightly and must not be injured by the tilting. Wet storage batteries, for example, must have a special suspension or support so they will remain upright. Further, the pack boxes riding on these pads have a very definite optimum size, which is determined by the size of the animal. Pack boxes about 10 inches wide, 18 inches deep and 24 inches long have been determined by long experience as most suitable. This is approximately of the same dimensions as the ever-present gasoline or kerosine packing case holding two 5-gallon tins which is found everywhere, and which is much utilized by the natives.

Thus, by a seemingly roundabout and remote chain of circumstances there is determined the size and shape of a container which in turn places the maximum limits of size, shape, and weight that must be approximately observed by the practical designer of geophysical apparatus. Articles that do not have to be packed in containers, of course, may exceed those pack box dimensions, as for example, tents, cots, etc.

Seismograph houseboat stranded in South America by an overnight fall in a river.

Sturdiness Necessary

Any attempt at an adequate discussion of the many problems involved in the design of equipment for an animal-packed party is far beyond the scope of this discussion. That the instruments must be unusually sturdy and capable of withstanding severe and ordinarily unexpected shocks and treatment is an inescapable fact. Sometime during the course of an ordinary job it is a practical certainty that each and every piece of equipment will be bucked off an obstreperous pack mule, dropped by a packer, and/or submerged while fording a river. Added to these are ordinary occurrences such as bumping packs against trees and rocks along trails, wetting by sudden rains when the pack covers are not in place, penetration by dust, and many other hazards that a geophysicist doing only routine work with truck equipment in the States can scarcely comprehend. Waterproofing and dust proofing in every possible manner is a constant objective.

Drilling equipment transportable by pack mules represents a further reduction in size and weight from cart or wagon equipment. Portable, knockdown, motor-driven drilling equipment capable of 100-foot holes under ordinary conditions is available. The mud pump and engine usually constitute the heaviest and most awkward to pack in pieces.

Transportation of camp equipment and living accommodations for the American and technical personnel, as well for the native labor, represents a large problem. This may be supervised directly by the party chief through his native foreman, or in conjunction with men from the geological staff who may be accompanying the party. For example, consider a seismograph party that may be operating in one of the Latin-Americas. It will comprise about a half dozen members of the geophysical party proper, two or three engineers and geologists, a permit man familiar with both the ordinary natives and the various Indian groups, and anywhere from 20 to 50 or more permanent native laborers. Additional trail cutters, etc., may be picked up locally as the work progresses from one Indian village sphere to another. Even with each American's personal effects limited to half of one standard size pack box, a cot and bedding, (no folding chairs, etc.) a very large number of pack mules is required to transport the barest essentials of apparatus and living accommodations. Counting saddle mules and those required for a four or five-day pack of dynamite from the end of truck transport, a total of 100 to 150 mules will be kept busy at all times. Supplying food and pasture for this many animals is in many locations an exceedingly difficult task.

Portage Problems

(5) Portage of equipment becomes the last recourse as working conditions become too tough for other methods. A surprisingly large amount of geophysical and geological explorations has been conducted in this manner. The design of geophysical instruments that can be packed by porters is not very different from those that are to be packed on mules. If the topography and terrain are not too difficult a good, well-fed porter can carry about 80 pounds, although this figure may vary widely with the

strength of the porter, terrain, climate, etc. Though a pack mule can carry 200 pounds, it must usually be distributed in two packs, one on either side, while with porters the single load may be almost half that. While bulky, heavy articles such tents may be carried much easier in one piece by pack animals, it is evident that in case of necessity porters can transport the material for a geophysical program under any conditions where a man can walk or wade.

Areas in which porters rather than pack animals must ordinarily be employed are fortunately comparatively limited. Parts of the Latin-Americas such as sections of the Barco area of Colombia, and parts of Borneo, Sumatra and New Guinea are some of the locations where geophysical work using this method is being or has been actively pursued. The usual reason why porters rather than animals must be used is that in some cases very thick jungle, bad swamps and standing water can be traversed only by men. In such areas, the number of combined porters and brush cutters has been reported to have reached 200 to 400 men for various crews. Even so, only the barest necessities for shelter and food would ordinarily be carried for the party, American and native alike.

Manually portable drills for shot-hole drilling have been developed and are in use both abroad and in some of the very difficult areas of the United States, such as the Mississippi Delta. These drills and battery-charging equipment usually represent the heaviest and most bulky apparatus that cannot be conveniently disassembled further.

General Equipment and Program

Although the design of specialized geophysical equipment ordinarily will represent the individual companies' modifications of present instruments or developments based on them, both made in the light of expected conditions, a few extra comments are judged pertinent.

The basic principle of equipment specifications for most foreign service is that it probably will undergo very hard usage under unusual difficult conditions where repair facilities may be scarce. Hence, it should be as sturdy and simple as possible, and with all parts readily exchangeable and easily replaced when the inevitable deterioration or accident occurs. Closely paralleling this feature is the requirement that a complete stock of replacement parts and supplies adequate to meet practically any emergency should accompany the original equipment. To the writer's personal knowledge failure to do so caused one very expensive seismograph crew to sit idle one entire month.

It is obvious that the climate of the prospective territory is a major factor in the design of all equipment. The humid conditions encountered in some areas require the use of special moisture-resisting seals wherever possible. Transformers, condensers, vibrators and many other parts quickly fail if not protected. In dry, extremely dusty areas such as many of the Near and Middle Eastern countries, provision must be made as far as possible against the infiltration of fine dust particles which will penetrate the most minute openings. In tropical countries photographic supplies must be tropical-packed. Recording paper or film is packed in sealed foil containers which exclude air and dampness, and even the temperatures of 120°-140° F. frequently encountered have no immediate effects. Deterioration under these temperatures is more rapid, however.

Tools Vital

The necessary tools for making any possibly required repairs on all equipment should of course be included. In a few instances shop facilities may be available near the scene of operations, but generally the whole range of repair work must be accomplished by the facilities at hand and the initiative and ingenuity of the party members. Selection of the tools should be done by the party mechanic and some one familiar with conditions in the prospective country. In some instances it may be possible or preferable to purchase certain supplies in the larger cities of the prospective country. While an unduly burdensome amount of tools and repair parts should be avoided, the supply must be adequate for any possible contingency. One single day's shutdown of operations may represent the loss of a greater sum than the cost of an entire stock of tools.

The entry of equipment and supplies into a foreign country is often a slow and difficult process. Under all circumstances it is a task requiring a thorough knowledge of customs formalities and regulations. Ownership papers, as well as complete, detailed descriptions and specifications of all material are essential. In most ports of entry the services of customs brokers or agents are practically essential for material accompanying the party, and particularly for subsequent shipments. These firms, which specialize in expediting the passage of goods through the customs in each direction, have the information, experience and contacts to secure reasonably prompt service. Export as well as import regulations add complications in most foreign countries. The spirit which apparently guides the actions of officials in that service in some localities may leave badly-needed supplies lying untouched in the customs' warehouses for months unless convoyed through the maze of regulations by the brokers. The necessity for such a procedure is usually distasteful to the average operator but recognition of the situation is sometimes as essential as that of recognizing the futility of breaching a stone wall by repeated butts of the skull.

Plan Well

In many ways the planning, logistics and execution of a foreign oil exploration program closely resemble a military expedition, though the element of hostile resistance is absent except in a relatively few such places as the Motilone Indian country along the Venezuela-Colombia border.

The greatest difference is that the operating company must take account of the expenditures, for if the company is to be able to remain in business income eventually must exceed outgo. With unlimited facilities and financial resources governmental operations may be conducted even under inefficient methods, but where a final accounting is required of a private business only capable efficiency is adequate to maintain and increase operations. Careful preliminary planning is a first essential to success and this requires adequate information upon all conditions and factors to be encountered so far as possible. The airplane has now shrunk the world into a small fraction of its former size and while actual travel and work upon the scene of operations may still be by laborious and even primitive methods much time and effort can be saved by air transport. The writer once spent about four weeks traveling over a route in the Latin-Americas that later was jumped from end to end in one half day by air.

Mapping by Air

More and more it has become the practice for major companies to map their concessions first by air photos. The advantages of these maps are too well known to require much additional discussion or argument, although a few points are worth repeating. In entirely new country, which is only partially mapped or geologized, it is almost safe to say that no matter what the cost of aerial maps may be, it will be more than saved by the more efficient planning of subsequent geophysical operations. Unless an entire blanket geophysical coverage is intended, the aerial maps are used to determine locations of surface structures or suggestions of structures which thus furnish a starting point of operations.

In a large and comparatively unknown concession this localization of efforts may mean the difference between early successful results which will encourage the backers to further efforts, and abandonment of the program because random shots at such a big target failed to produce results in a short time. Moreover, the saving in the actual operations by planning them more efficiently from aerial maps is very great. Trails invisible on the ground can be spotted from air photos. The usual native guide is familiar only with his own locality and hence cannot compete with this source of information. The advantages of air photos for purposes of physical surveys, property, cultural and topographic determinations are well-known and highly important.

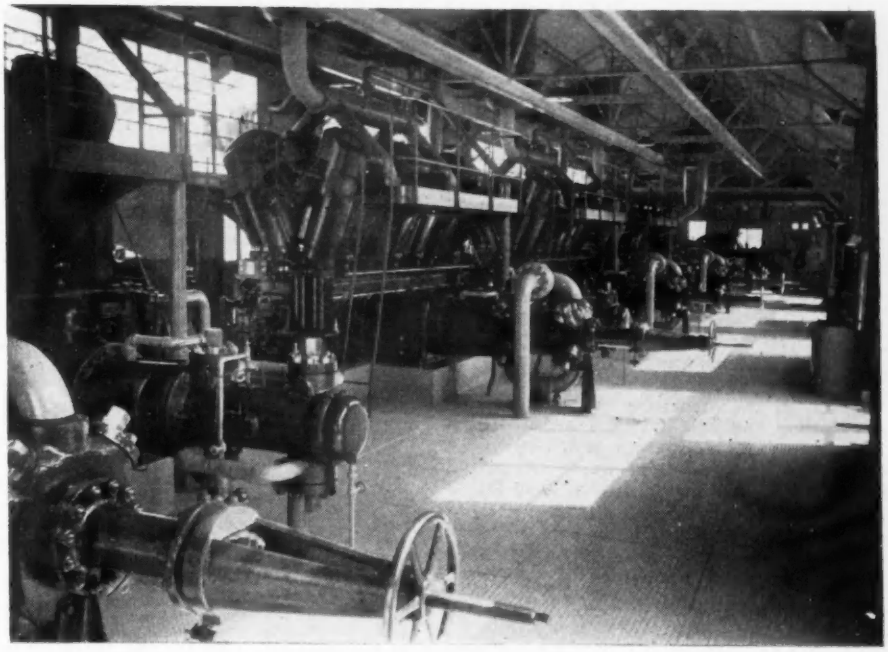
A final thought on the general philosophy of foreign exploration appears appropriate to close this discussion. With the exception of a few productive areas most foreign oil exploration will be conducted in localities relatively unexplored, both by previous geology and geophysics as well as the drill. Literally speaking, some of it will be truly unexplored. A well-integrated program of exploration thus becomes possible to the executives, by means of which cartography, geological data, and geophysical investigations may all be blended into one extensive, exacting but wholly fascinating procedure.

The development stage is substantially that of the early days of the United States oil industry, but with all the knowledge, tools and facilities slowly gained over years of hard experience telescoped together for use. In his memorable discussion of the United States oil industry, Wallace Pratt appropriately emphasized the apparently innate ability of Americans to find oil. This background of experience and "know-how," combined with unexplored oil resources abroad, can work together to produce a harmonious and profitable result to the mutual benefit of all concerned.

La Goleta Gas Storage

Underground projects let California transmission companies depend on gas produced with oil wells despite sharp seasonal fluctuations in demand.

By RAYMOND W. TODD
Pacific Lighting Corporation



View of interior of La Goleta injection compressor plant.

SUPPLYING of natural gas to the Southern California area presents many interesting and varied problems. In the first place, gas companies are almost wholly dependent upon oil well gas as a primary source of gas for distribution. Inasmuch as the production of oil well gas is dependent upon the production of oil, the supply of gas is more or less fixed at a constant rate. The amount of oil well gas available for consumption by customers in Southern California is approximately 450M² cubic feet daily. Normally this production of oil well gas exceeds the market requirements during the summer months, or off peak period, but fails to meet such requirements during the winter months, or peak period. For example, on February 28, 1945, the gas companies experienced a day of very heavy demand, which resulted in the distribution of 617M² cubic feet of gas. This load was all firm load, inasmuch as practically all surplus rate curtailable industrial load had been shut off. During this summer, we have experienced days on which our total actual delivery was less than 350M² cubic feet. This amount including the sale of all industrial gas requirements.

Underground Storage

Considering these maximum and minimum load requirements with industrial consumers, off in one instance and on in the other, it is obvious that some means of equating the winter and summer load factor must be provided. The partial answer to this problem has been underground storage of gas during the summer and its subsequently withdrawal and use during the winter. However, before discussing the problems in connection with underground storage of gas, consider another supply problem with which gas companies are constantly confronted. In addition to having to equate a winter and summer load, it is also necessary to provide facilities for equating the daily load. Southern California often has daily temperature variations as high as 40 degrees. Such temperature fluctuations naturally result in a tremendous variation in gas demand. For example, referring back to the peak day of last February, the maximum hourly delivery at a daily rate was 852M² cubic feet, while the minimum hourly delivery at a daily rate was 234M² cubic feet—a ratio of almost 4 to 1 between maximum and minimum.

In the past such daily fluctuations have been met through the use of dry gas production, above ground storage, pipe line pack and gas manufacturing operations. However, with the increase in firm load demand, it has been impossible to fully equate the load by these means, and it has been necessary to utilize underground storage to alleviate these daily fluctuations. There were many instances during the past year when gas would be injected in underground storage during the night or off peak periods and withdrawn during the day or peak period, all within a 24-hour period.

During the maximum rate of delivery of 842M² cubic feet of gas on the peak day last winter, gas was withdrawn from underground storage at the rate of 193M² cubic feet per 24 hours with 150M² cubic feet of this amount of gas being withdrawn from the La Goleta field.

Two Functions

From the above load conditions, it is therefore apparent that the underground storage projects perform two functions; first, provide means of storage of surplus natural gas during the summer period and making this gas available during winter; and, secondly, to equate daily and hourly fluctuating loads.

Underground structures suitable for gas storage have been sought by gas companies for many years. Tests have been made on various structures, the majority of which did not prove satisfactory. Some of the conditions which must be taken into consideration in deciding if a structure will be suitable for gas storage are:

1. The closures of the structure must be such that there is reasonable assurance of gas injected will be recovered.
2. Water encroachment must not be at a rate which would interfere with the use of the structure.
3. The structure must be of sufficient capacity to warrant the necessary capital expenditure for injection and withdrawal facilities.
4. The permeability of the sand in the reservoir must be such that gas can be injected readily and withdrawn at high rates over an extended period.
5. The sand in the structure must be reasonably free of liquids which might be picked up by the injected gas and present serious removal problems.
6. The structure must be at a location which would make the transmission of gas to the distribution locations practical.
7. The necessary right to use the structure for storage purposes must be obtainable from the oil companies and/or those holding such rights.

A storage structure need not necessarily meet all the above conditions, but each must be taken into consideration when studying possibilities of gas storage. In most instances, the problem of ownership or rights in the structure, or surface rights, are so complicated that it eliminates the use of the structure for

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gas storage without considering the other factors.

La Goleta Reservoir

There are at present several underground gas storage reservoirs being utilized in connection with the conserving and supplying of natural gas for Southern California. The largest and most important of these underground storage projects is in the La Goleta field.

Before going into the details of the La Goleta storage project, it would be advisable to briefly review the history of the La Goleta field. The La Goleta field is located on the coast, approximately eight miles north of Santa Barbara. The field originally was discovered by one of the major oil companies in 1929. The formation in which the storage operations are carried on is a Vaqueros sandstone and is approximately 4300 feet below sea level. The Vaqueros zone has an average thickness of about 300 feet and is considered ideal for gas storage operations, inasmuch as it has a porosity in excess of 20 percent. Between 1929 and 1935 four additional wells were completed in the structure. All these wells, including the original well, were drilled by major oil companies endeavoring to strike an oil zone, and were not drilled for the production of natural gas. These wells and others drilled outside the limits of the field area have defined the productive Vaqueros zone as covering an area of approximately 295 acres.

Unfortunately, the original well head pressure was not observed in the discovery well; however, record of the well head pressure was noted as 1700 pounds per square inch gauge after several months of testing. This pressure has been considered to be quite accurate, inasmuch as fields of this type generally have a formation pressure equal to the hydrostatic head of salt water, which at a depth of 4300 feet would be 1904 pounds per square inch gauge, which pressure corresponds to a surface pressure of approximately 1705 pounds per square inch gauge.

In order to utilize the gas produced in the La Goleta field, pipe line facilities were installed in 1931 which would allow the withdrawal of gas for use in the Los Angeles area. This withdrawal continued for a period of years up to 1939, during which time 15,300M³ cubic feet of gas was withdrawn from the structure. The production of this amount of gas resulted in the well head pressure being lowered to approximately 1450 pounds per square inch gauge. In 1939, the increase in firm load requirements and the necessity of equating the summer and winter loads, prompted the Pacific Lighting Corporation to start tests on the structure to determine the feasibility of utilizing the structure for dry gas storage. The necessary test facilities were installed and during the summer of 1939, several hundred million cubic feet of gas were injected and the resulting pressures observed.

Structure Proven Adaptable

The results of these tests indicated there was no question but what the structure was adaptable for underground storage, as we proceeded to acquire the necessary rights to use the structure for storage operations. As much of the property as possible was purchased in fee, while on the remaining property all gas between the bottom of the Vaqueros zone and the surface was purchased in place, along with the right to use the structure for storage purposes. The five wells which had been drilled in the field by the oil companies were purchased from the oil companies for use as withdrawal and injection wells.

The pipe line facilities which originally were installed had a capacity out of the La Goleta field of 65M³ cubic feet. The original wells drilled by the oil companies had a combined production capacity of approximately 100M³ cubic feet, when the wells were operated on the basis of not exceeding 500 pounds draw-down during production. This maximum draw-down pressure was established in order to eliminate a high sand face velocity.

In order to provide sufficient injection capacity to inject the required volume of gas during the summertime to meet the winter withdrawal from La Goleta, Pacific Lighting Corporation, in 1941, completed the installation of an injection plant, consisting of four 600 horsepower and one 300 horsepower gas engine driven compressor units. This plant had a total injection capacity of approximately 30M³ cubic feet per day. The compressor plant was designed and constructed to operate at a maximum discharge pressure of 2500 pounds per square inch gauge and the intake pressure of 350 pounds. Gas for injection being supplied from oil fields in the coastal area.

The operation of the field and its facilities during 1941, 1942 and 1943 verified the results of the injection test made in 1939, and proved beyond a doubt that the La Goleta field was suitable for gas storage. In 1943, the gas companies were confronted with the problem of supplying additional gas during the winter periods, and providing a means of conserving increased amounts of natural gas during the summer months which were available as a result of the increased oil production. In view of the satisfactory operations at La Goleta, the La Goleta field was selected as the location for the additional storage operations.

The additional gas necessary to meet the winter load requirements and the capacity for utilizing summer excess gas established the operations of the La Goleta storage project as follows:

Withdrawal capacity.....179M³
Injection capacity..... 65M³

In order to meet these requirements, the following installations were agreed upon:

(1) Install a high pressure transmission pipe line from La Goleta to the Los Angeles area.

(2) Install 1000 pounds per square inch gauge compression equipment at Ventura, in order to provide gas for injection at Goleta during the summer period.

(3) Install additional injection facilities at La Goleta to increase the injection capacity of the plant from 30M³ to 65M³ cubic feet per day.

(4) Install dehydration facilities at La Goleta for removal of water from the gas, prior to its being delivered into the high pressure pipe line facilities.

(5) Drill two additional wells in the La Goleta field in order to provide sufficient withdrawal and injection capacity.

The proposed pipe line from La Goleta to Ventura was to be installed by Southern Counties Gas Company, and was planned as a 16-inch line to operate at 1000 pounds per square inch gauge. The line from Ventura to Los Angeles was an 18-inch line which was designed to operate a maximum pressure of 783 pounds per square inch gauge. The lines were planned to operate at these higher pressures in order that the field pressure at La Goleta could be utilized and the gas transported from La Goleta to Los Angeles without compression.

The installation of a dehydration plant was necessary, inasmuch as the original pipe line from the field operated at a maximum pressure of 460 pounds per square inch gauge and condensate could be removed by cooling the gas through expansion from field pressure down to 460 pounds per square inch gauge. However, with the proposed pipe line facilities operating at 1000 pounds per square inch gauge pressure, there was not sufficient expansion from field pressure to provide enough cooling to remove the water. In addition to this, considerable difficulty had been experienced in maintaining accurate control over the cooling in order not to cool to a point where gas hydrates would form.

To provide the facilities to meet the required injection capacity of 65M³ cubic feet, Pacific Lighting Corporation installed three additional 600 horsepower units. These units along with those in the original plant resulted in the plant having a total of 4700 horsepower. The three new units were installed so as to operate with an intake from the new 1000-pound line, thereby utilizing this line to its fullest efficiency.

Two wells to be drilled were located with respect to the existing wells to provide as uniform spacing on the structure as possible. A portion of the ground surface in the field area is at present occupied by the Marine Air Corps Base. Inasmuch as the purposed location of the wells came within the air strip, it was necessary to offset the well derricks approximately 1500 feet and slant drill by means of whip-stocking to the desired bottom hole location. Standard drilling procedures were followed in the drilling of the wells down to the top of the structure. Upon reaching the top of the structure, 8⅝-inch casing was set and cemented in place. Following the installation of the 8⅝-inch casing, the wells were drilled into the formation sand. Drilling in the structure was planned so the drilling mud stood in the hole as short a time as possible, in order to eliminate sealing the sand with mud.

The first well encountered 400 feet of very coarse sand, while the second well was completed in 300 feet of finer sand. Following drilling through the sand an electrolog was run on each well and the extent and location of liner perforations were determined from these logs after which the 6⅝-inch perforated liner was hung. Two-inch tubing was then hung in the well to within 25 feet of the bottom, in order to remove any liquids which might accumulate in the well. The wells were then brought into production and produced open until they had cleaned up.

Production tests were run on each of the wells before connecting them into the field system. The first well produced at a rate of 145.4M³ cubic feet of gas per day through the casing and the second well produced at a rate of 128.1M³

cubic feet per day. The production rate on the first well of 145.4M³ cubic feet, to our knowledge is the highest rate of gas production for a single well under control in California.

Our experience in operating the field as a gas storage field during the past four years has revealed many interesting facts. Continuous pressure checks are made on the various wells in the field by the means of dead weight testers. These pressures, along with the volumes of gas injected and withdrawn, show that approximately 30M³ cubic feet of gas is required to change the pressure in the structure one pound within our present operating range. During the past year the highest pressure reached was 1765 pounds per square inch gauge well head, some 50 pounds per square inch gauge above original pressure.

Reducing the pressure of the structure below the original structural pressure results in a loss in reservoir capacity which is assumed to be attributed to water encroachment. Calculations show this loss to be at an average rate of ½ of 1 percent per year per 100 pounds pressure below the original structural pressure. To date this accumulated loss of reservoir capacity equals approximately 7.82 percent. Inasmuch as continuing operations of the structure below the original structural pressure would have resulted in serious loss in reservoir capacity, our first objective was to inject sufficient gas to restore the original structural pressure.

In order to prevent further water encroachment our plans call for operating the structure so that the average structural pressure will not be below the original well head pressure of 1705 pounds per square inch gauge. However, it is difficult to predict the action of the structure when increasing the pressure above the original structural pressure. This year we expect to increase the structural pressure approximately 100 pounds above the original pressure and observe the results.

Future plans call for injecting and withdrawing 10,000M³ cubic feet per year. Such a cycle will result in a pressure fluctuation in the structure of approximately 300 pounds. Assuming that the edge water can be displaced by increasing the pressure above the original pressure at the same rate at which encroachment took place when pressures were below the original pressure, then it would be necessary to increase the pressure to approximately 150 pounds above the original pressure.

The use of underground storage for natural gas is not new, as there are fields in the United States where this operation has been carried on as far back as 1915. However, in the last few years there has been a decided increase in the number of fields utilized for this means of conserving gas and equating loads.

E. G. Dahlgren of the Interstate Oil Compact Commission reported in 1944 that there were more than 55 storage projects in operation in the United States, with a total withdrawal capacity of some 750M³ cubic feet per day. In 1945, the number of storage projects had increased to more than 65. It is hoped that sufficient gas storage projects will be placed in operation in the United States to conserve as much as possible of our natural gas.

Storing Foreign Oil

■ CONTINUED FROM PAGE 43

to give up its normal markets to supply more than a small fraction of the proposed 5 billion barrels. So it would appear that the major part, if not all, the oil intended for such storage would have to originate in the Near East. Although Near East reserves are said to be the largest in the world, it must be remembered that most of the oil which might be imported would be of very low gravity. There is no ready market today for the oil from one of the largest proven reserves in the Near East as it ranges from 12.2 to 19.5 gravity and has a sulphur content ranging from 6.0 to 11.8 percent.

8. One can speculate to his heart's content on the actual total cost per barrel of such stored crude oil to the taxpayer when and if it is delivered to the refineries during a war emergency. When one considers the purchase price of the crude, ocean and pipe line transportation charges, lease rentals for years or outright purchases of acreage, development and operating charges, cost of injected gas, producing costs, losses in recovery, and interest on the investment, it is easy to see how such stored oil might prove extremely expensive. There are too many unknown factors to make an accurate estimate. Rough estimates indicate it could easily amount to $3 or more per barrel of stored crude produced and delivered back on the East coast to refineries. Much depends upon the length of the storage period. Think of all the additional wildcatting that could and would be done if our government would guarantee a price of even $2 per barrel for a 5 billion barrel increase in our national reserves. Or consider the thousands of acres of stripper-well areas that would be converted to secondary recovery operations.

In conclusion it may be said that proposals to store foreign oil in our fields are not only impractical but also unnecessary. Our larger oil companies have always had long range policies. Industry can meet the requirements of all future emergencies if sound price policies are indicated. In addition, research, conservation, and sound foreign oil policies will help to solve the problems of supply in the future. Industry, and our nation as a whole, and foreign governments with large oil reserves would never approve of the 5 billion barrel storage proposal. It could and probably would seriously upset in time the economic structure of all nations producing oil. The only sound importation policy is believed to be the one quoted by Ralph Zook before the IPAA last February which he credits to a publication of The Standard Oil Company of New Jersey. It states:

". . . that the importation of oil into the United States not be destructive to our own oil industry and domestic economy.

"When oil or oil products must be imported to supplement the domestic supplies of the United States, this should be done without so damaging our industry that the finding and development of reserves here would be hampered. Hence, imports should be admitted only for special purposes or to supply requirements that could not be met by orderly and efficient withdrawals from American fields."

Depletion Allowance

■ CONTINUED FROM PAGE 45

scheduling of operations in order that a portion of the costs, particularly if you operate your own drilling tools, could be incurred during the latter part of one tax year and the remainder of these costs incurred during the first month or months of the subsequent tax year, thereby possibly obtaining larger depletion allowances for each of the tax years. Further, (2) reviewing the allocation bases of district and administrative overhead, (3) recording of intercompany earnings and (4) other procedures which may prove advantageous.

Although these hypothetical illustrations portray the principle, the amount of tax savings will vary considerably with actual experience, probably producing greater variations than shown above. Further, the questions of lease requirements, drainage, moving and other costs of drilling, allocation of overhead costs, personnel, availability of funds, proration, and *particularly the tax rate and effect in the subsequent year* must be given full weight in the final analysis before making a decision as to the well location.

As an additional illustration to the principle, suppose in December "X" Corporation has a well that needs acidizing which costs have been estimated at $4000. Earnings for the year on the property amount to $25,000 and all expense other than acidizing (disregarding cost depletion) total $20,000. Providing the tax rate is identical for the two years and that the job can be deferred until January without ultimate loss by drainage, the probable tax savings will be approximately $800 as against incurring the expense in December upon the assumption that the total expenses including the acidizing for the subsequent year will not exceed 45 percent of the income on the particular property. This is illustrated in the example shown in Table 6.

The tax accountant should strive to maintain the expense on each separate property at less than 45 percent of the gross income for each year of the lease's existence in order to secure the maximum depletion benefits, as when the expense equals from 45 to 100 percent of the income on each separate property, and additional dollar of expense reduces the depletion allowance by 50 cents and benefits the taxpayer based on a 40 percent rate only to the extent of 80 cents on a dollar spent on that property.

If you are not consulting your tax accountant before making expenditures on individual properties, it may be you are under the impression that you are securing a full tax advantage on each dollar so spent when in reality you benefit in some cases, as shown above, at a lesser figure. This tax savings of approximately 20 percent could be the difference between being "liquid" and being "in liquidation" during the postwar era.

New Texas Permits

Permits to drill 133 new wells in Texas were approved by the Railroad Commission last week. The wells included 39 in North Texas, 35 in Southwest Texas, and 30 in West Texas.

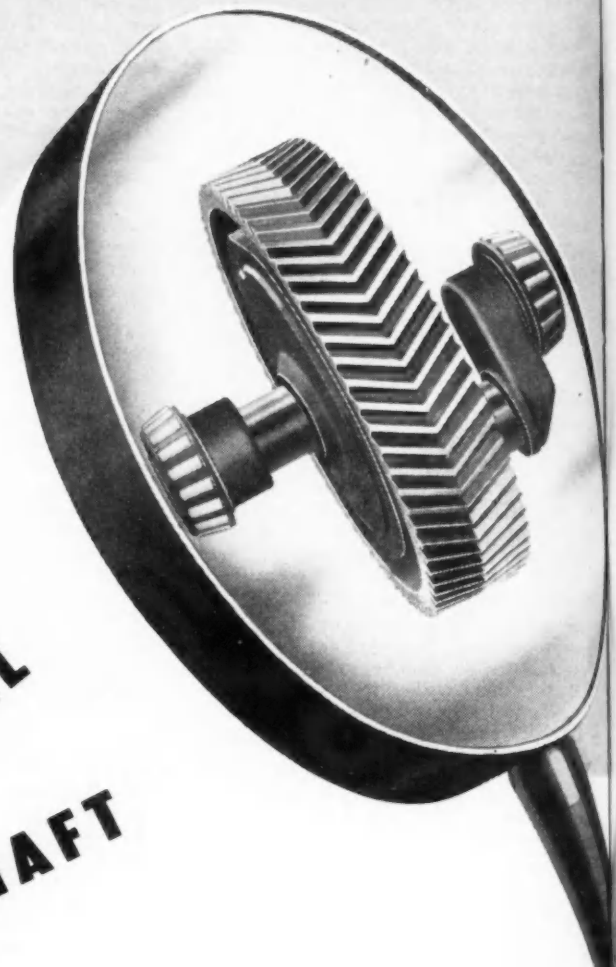
There were 13 locations from West Central Texas; the Gulf Coast reported seven, the Panhandle five, and East Central Texas four.

Quality

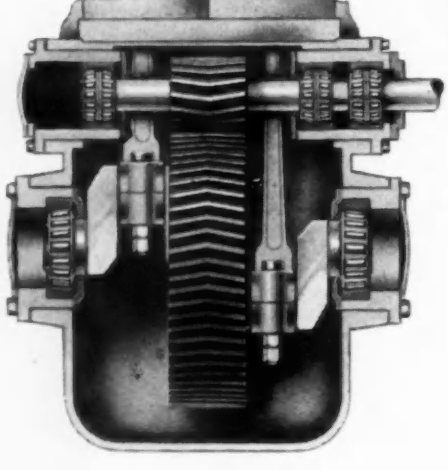
UNDER THE MAGNIFYING GLASS

AMONG THE INGREDIENTS OF GASO SUPREMACY

- Large Valve Openings
- Individual Valve Chambers
- Deep Stuffing Boxes
- No Overlapping of Rods
- Babbit Lined Shell Bearings
- Flood Lubrication
- Large Roller Bearings
- Extra-Large Alloy Steel Crankshaft
- Alloy Steel Lapped Herringbone Gears



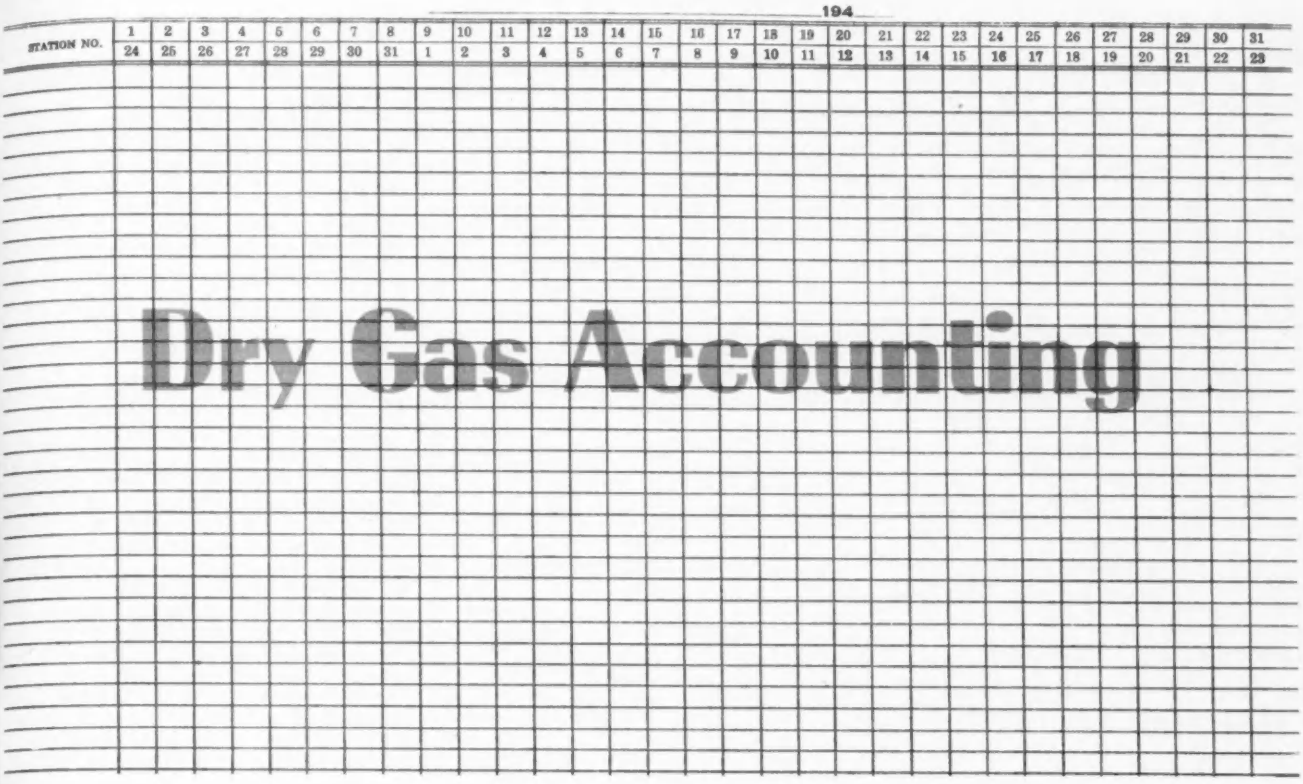
EXTRA-LARGE ALLOY STEEL CRANKSHAFT



"Extra-large" is a word that appears frequently in Gaso specifications. It symbolizes a fundamental policy: Eliminate unnecessary parts but endow each part with an extra measure of strength and staying power. By proving a reserve of durability, Gaso design assures a bonus of pumping service which, in turn, represents extra dividends on the investment. . . . Gaso Pump & Burner Mfg. Co., 902 East First Street, Tulsa, Okla. Export Office: 149 Broadway, New York. Shreveport: W. L. Somner Co., 419 Lake St. Los Angeles: Production Equipment Co., 651-653 E. Gage Ave.

GASO PUMPS

for every oil industry need



Close association with field measurement problems aids gas accounting efficiency

By CECIL VAN GUNDY
Panhandle Eastern Pipe Line Company

GAS accounting departments are organized in various ways. In some companies, gas measurement field work, chart calculation, billing to customers and payments for gas purchased or produced are under one department head.

In others, a meter department handles field work, with the gas accounting department handling chart calculation and the additional work of gas accounting.

In the company where the writer is employed the superintendent of measurement is responsible for field measurement and the handling of charts and associated work through the calculation of gas volumes. The general accounting and treasury department heads are responsible for the balance of work of gas accounting. With this arrangement, the gas accounting section handles the chart calculation work and gas accounting by sending bills to the customer and issuing gas purchase and royalty checks. We also assist the superintendent of measurement on various problems.

Close association with field measurement problems contributes to efficiency in our gas accounting. We follow the movement of gas volumes from the well to the city gate meters or the ultimate consumer.

The Scope of Gas Accounting

Gas accounting begins with the correct interpretation of chart records and the accurate determination of gas volumes. After gas volumes flowing through meters are available, they should be properly recorded on ledger sheets and from classified monthly totals customers bills can be prepared or statements made for use in connection with payments to be made for gas purchased or for gas royalties. In addition, statements showing gas volumes may be used in statistical reports or other statements of value to the operation of the company.

Mechanical Equipment and Records Needed

While the type of equipment described herein is that required for a large scale operation, the same ideas apply to the operation of smaller offices. The gas accounting office either should have access to or available in its own office the following equipment and records:

(1) Mechanical type orifice meter chart integrators.
(2) Comptometers.
(3) Calculators.
(4) Bookkeeping machines.
(5) Index of measuring stations.
(6) Index of meters owned by company.
(7) Index of orifice plates.
(8) Index of orifice meter coefficients.
(9) Index of customers to whom gas is sold.
(10) Index of purchase gas and production royalty payees.
(11) Files for data regarding each measuring station and for other data used in gas accounting.

Source of Information for Gas Accounting

The gas delivery contract or service agreement is an important source of gas accounting information. The gas accounting department obtains information on the base cubic foot, the monetary rate per unit of volume, the location to which a bill should be sent, and many other items of information needed for everyday operation of the department.

Gas purchase and gas royalty contracts and payment division orders applicable to each are the source of necessary information for making payments for gas purchased and royalties. The information in this case originates in the land and lease department. Addresses of payees and changes of address are furnished from that department.

When new measuring stations are installed and made ready for service, a report should be furnished by the field measurement supervisor who has installed a station designed to measure accurately the minimum and maximum hourly deliveries expected. This report should list the essential data needed by the gas accounting department to understand the measurement of gas through a particular station. Important items in such reports are as follows:

(1) Station number and name.
(2) Location of station by section, township, range, county, and state.
(3) Company line number to which the station is connected.
(4) Type of meter installed.
(5) Chart number used on meter.
(6) If orifice meter, whether flange or pipe taps and location of static pressure connection.
(7) If differential limit controllers are used in multiple run stations, the primary meter number.
(8) Type and size of regulating equipment.

MEASURING STATION

ESTABLISHED
ABANDONMENT

Date of Report..... 19.....

W. O. No..... Drwg. No..... Date Work Started..... Date Completed.....

Description.....

Measuring gas from..... Co. to..... Co.

Station Number..... Station Name.....

Sec..... Twp..... Range..... Block..... Survey.....

County of..... State of..... Pipe Line Dist. No.....

Connect — Disconnect

Date gas turned on off..... 19..... @..... A. M. P. M.

Type Meters..... Size..... Range..... Max. Working Pressure.....

Meter Number..... Plate Size..... Plate Number..... Reading.....

Gauge Number..... Range..... Clock: 24 Hr.—7 Day—Index Driven

Chart No..... Taps: Flange — Pipe Static Connection: Upstream — Intermediate — Downstream

Inside Diameter Measurements of Upstream Orifice Meter Pipe Sections. Published I. D.....″

Run No. 1: Av. I. D.....″ Out of R.....% Run No. 2: Av. I. D.....″ Out of R.....%

Run No. 3: Av. I. D.....″ Out of R.....% Run No. 4: Av. I. D.....″ Out of R.....%

Recommended Maximum $\frac{d}{D}$ ratio.....

Additional Equipment:.....

Type and Size Building.....

Associated Stations (See Note Below).....

Reading will be reported on chart from..... Meas. Sta. No.....

Charts will be changed by..... Signed _____
Meter Engineer

NOTE:—Indicate by sketch on reverse side, the relative location of this station with regard to all associated lines and wells and other measuring and regulating stations through which this gas may be passing.

(9) Type and size of building.
(10) The stations' relation to other measuring stations in the immediate vicinity.

If such forms are used, it is good practice to have meter and orifice plate change reports furnished with the station establishment report so that when the first chart arrives from the new stations, the gas accounting office is acquainted with the measuring station and has all necessary data to begin the calculation of gas volumes.

Classification of Gas Accounting Information

From the reports furnished at the time a measuring station is installed, entries can be made on indexes of measuring stations, meters and orifice meter coefficients, if orifice meter is installed. The measuring station index should indicate name of the purchaser or seller, the monetary rate at which gas is sold or purchased, the absolute pressure and temperature base of the contract cubic foot, and the location to which a billing statement or gas purchase check should be sent. Other necessary items are date of station installation, date of first delivery, chart numbers, date and term of contract, type and size of station meter numbers and type and size of building. The meter index should list the type and size of meter, the meter number, the measuring station at which installed and the date of installation. If a displacement meter, the index reading at the time of installation should be listed.

Some companies have a complete index of displacement meter stations showing the type and size of meter, type of gauge installed, chart number, absolute pressure and temperature base of the contract cubic foot, and if more than one meter, the meter on which the gauge is installed.

For convenience in reference, the index of measuring stations should be classified into types used in the accounting system. Typical classifications are production and purchase by states, line check, company fuel, sales and exchange. The orifice meter coefficient index should list the station name and number, meter numbers, date and time orifice plate is installed, orifice plate size and serial number, the absolute pressure and temperature base, specific gravity and flowing temperature base if assumed and agreed upon, and the orifice flow constant calculated by using the basic conditions listed on the coefficient index.

A file folder should be established for each measuring station and the station installation report, a copy of the gas delivery contract and if a production or purchase station, a copy of the payee division order, should be filed in the back of each folder. If such data are available, it is useful to have copies of work orders for station construction or changes after construction, together with sketches of station piping and sites.

If desired, a tabulation of payees for gas purchased or production royalty can be listed on the station index or a separate index can be used. It is also useful to have an index of individual payees showing the stations in which they have an interest.

Accurate Determination of Gas Volumes

The chart receipt should be recorded by removed hours and dates on a permanent record so all charts for a fiscal period and the continuity of time can be accounted for.

After receipt is recorded, charts should be furnished to a chart censorer for observation of irregularities which may affect gas volumes if not taken into account at the time charts are calculated. It is helpful to the gas accounting office if a trained field man is available for chart censoring. If not, the employe assigned to this work should be allowed to take an occasional field trip to learn about measuring equipment and understand how various troubles with mechanical equipment may affect chart records and the determination of gas volumes. The chart censor should mark charts so that changes in orifice plate size are accounted for. He should watch for sudden changes of pressure and differential on orifice meter charts. If the differential travels suddenly to the upper limit, some mercury may be blown from the meter, and records after that time would be wrong until the mercury level is corrected.

Displacement meter charts should be observed for sudden pressure changes, as such occurrences may damage the meter mechanism. The chart censor should find missing records of pressure, differential or temperature and supply them on the chart if possible to estimate. All types of irregularities affecting measurement should be reported to the person in charge of the station, so they may be corrected as soon as possible. It is impractical to list all irregularities which affect accurate determination of gas volumes, but a good chart censor can be valuable aid to the operation of the field department and the gas accounting office.

In the calculation of orifice meter coefficients, careful attention should be paid to orifice and line size when orifice plate change reports are received, the orifice and line size and serial number for the new plate installed should be compared with the index or orifice plates.

Pressure and temperature bases should be checked on measuring station index.

Correct following of lines during intergration of orifice meter charts should be insisted upon. To insure the continuity of counter readings for a group of charts, they either can be checked by some other employee or a system devised to determine whether the total of extensions for a group of charts is the same as the difference between the initial and final counter reading multiplied by the integrator constant for the chart range.

If gas measured by displacement meters is accounted for on various pressure bases, the use of base pressure factors should be carefully checked. Factor application for orifice meter calculation depends on whether the entire procedure

described in AGA Gas Measurement Committee Report No. 2 is applied.

Gas Volume Records

If the company is so organized that gas volume determination, recording and accounting are performed in the same department the entire procedure can be efficiently organized.

Gas volumes should be entered on some type of permanent ledger record. The best way of keeping a ledger record is by individual meters. The ledger record should show the name of the purchaser or seller, the measuring station name and number, the type of meter delivering gas and the period to which the delivery is applicable.

If the volume of charts handled is not too large, posting may be done manually and a bookkeeping machine may be used for a large volume of work. At the end of the fiscal period, gas volumes can be totaled and accumulated in any manner needed for customer billing, purchase and production summaries and other statements.

Customer Billing

Customers' bills should be prepared with extreme care, as the appearance of an invoice sometimes has a good effect on customer relations. If detailed statements are required to support gas invoices, the form of the statement should be that which can be of most value to the purchaser. Billing statements should be carefully checked for correct designation of gas volumes and invoices checked for rate application. Some large volume billing requires special calculation of division of gas, some require only a multiplication of volume times rate to obtain the amount of the bill.

Purchase and Royalty Payments

Gas required for our companies' delivery and use is either obtained by purchasing direct from another producer or taken from a company-owned well. If purchased, all the gas price may be paid to one person or the producer may order the purchaser to pay a portion of the amount to another person or persons. For gas produced by the company, it is a general practice to pay the land owner ⅛ of the field value of the gas. Occasionally, the ⅛ royalty payment is apportioned among several interest holders and separate payments made to each.

The division of gas purchase or royalty payments among several interest holders makes the problem of paying for our gas supply more complicated than collecting for our sales to customers. If a bookkeeping calculating machine is available, the division of the payments between interest holders may be rapidly determined through the calculating devices on this machine. If done by a comptometer or a mechanical calculator, the operation is a little slower.

After proration of royalty interests is finished and the amounts to be paid for gas purchased is available, a summary of gas purchase and production cost can be prepared for further use in accounting.

The methods of issuing checks for gas purchase and royalty vary among gas companies. Some companies do not issue a check until the amount due one person is $5 or more, while some issue checks for all amounts. In some companies, if a person has an interest in production or purchase from more than one well, a combined payment form is prepared, the total amount due is determined and a single check issued.

Checks can be written with a bookkeeping machine and the check register can be a copy of the prepared checks. The check stub should contain enough information on the volume of gas purchased or produced that the person receiving the check will know what he is being paid for. An advantage of the bookkeeping machine is that totals of checks being issued can be accumulated on the machine register and listed at the end of a series of checks. If desired, the check register can be totaled to account for the purchase and production cost in the various states in which a company may operate or in any other classification needed.

DISPLACEMENT METER CHART RECORD

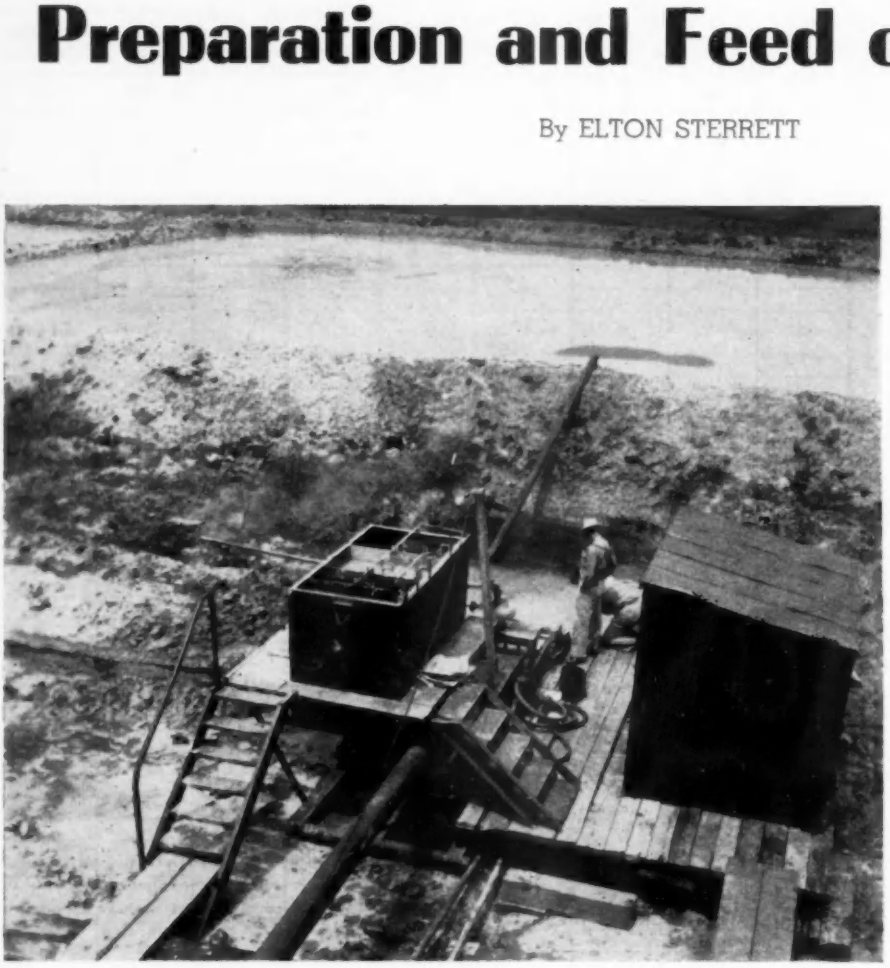
TESTS		
DATE	INDEX RD'G.	REG. BETWEEN TESTS

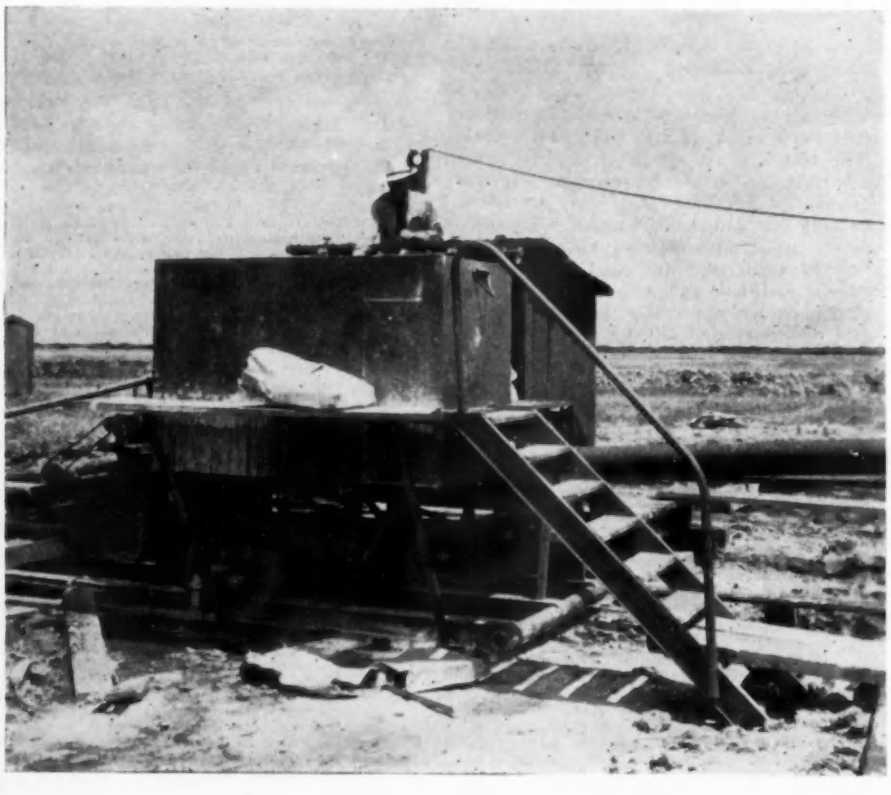
STATION NAME _____ NO. _____
MEAS. PRESSURE _____ METER NO. _____
TYPE OF GAUGE _____ CHART NO. _____
REG. PER CHART REVOLUTION _____
REG. PER VOLUME LOOP _____
VOLUMETRIC GAUGE ON METER NO. _____

DATE	INDEX RDG.	DIFF.	DATE	INDEX RDG.	DIFF.	DATE	INDEX RDG.	DIFF.

Rectangular Mixing Tank Simplifies Preparation and Feed of Additives

By ELTON STERRETT





Single welded unit flanking mud flume ahead of shaker is means for accurately metering water for stated chemical amounts

BLENDING of acids, thickeners and other chemical ingredients which must be added to the mud stream to meet special formation conditions, most effectively conditions mud when a thorough mix is obtained, and when this mix is fed to the stream in metered and equal amounts. To obtain these desired results, one tool-pusher designed and had built a rectangular mixing tank to take the place of oil drums, cylinders and other vessels usually mounted astride the mud line for mixing and feeding additives. This rectangular tank, skid-mounted, is set alongside and just above the rectangular flume which is used to dampen pulsations and present an even flow to the shale shaker.

The tank is welded from steel plate, heavy enough to hold its shape on the ends when supported top and bottom by welding beads, and large enough to give a total capacity of approximately 7½ barrels of 42 gallons. The unit is divided by cross walls to provide two main tanks of about 120 gallons capacity when filled to six inches from the top, each of the other smaller sections having

The mixing tank, top photo, carrying a battery of similar vats, is set alongside the rectangular mud flume to permit the contents to be metered accurately into the flow. The two stairways, composed of non-skid steel like the walkway around the tank, are welded into place to prevent shifting, and are freed with the torch before being moved to a new site.

Close-up of the tank, lower photo, showing braced supports which unitize the vat and its skid. The braces which give stability to the outer edge of the walkway are visible, being carried on the lower flange of the skid beams. The walk is placed at the proper level to make handling of materials as easy as possible, and to give as much clearance as possible above the contents of a vat being heated by steam entering through the central line.

a 40-gallon capacity. This known capacity of each section enables it to be filled to the desired level with water, and the chemical then weighed or measured before blending to provide a mixture of known strength.

Protecting Outlet Line

To protect the outlet line, set into one corner of each section and equipped with valve for flow control, a screening element of tank plate, formed to a quadrant with a six-inch radius, is welded between cross wall and side of the main unit. This screen is formed by drilling or burning small holes at intervals all the way up the unit, so that straining of the efflux is obtained until the tank is emptied. To provide for cleaning these screens quickly, the line through which the cold water is admitted to each section is installed inside the screen, so that fresh water must flow out through the perforations in a direction counter to that taken by the mixture as it is fed to the mud stream.

U-shaped brackets, welded to one end and at the center of each transverse bulkhead, provide support for the steam line which heats the mixtures, each down-leg being equipped with a valve above the liquid level for control of the temperature of the unit.

Since both vat sizes are duplicated in the set-up, it is possible to be feeding additives to the mud flow from one each of the large and small units simultaneously, and at the same time be blending like quantities of materials in the other two units, so that the flow may be maintained without interruption or the need for slugging to make up for breaks while new batches are prepared.

The vat is carried on cross-braced supports which give the desired height above the mud flume so that the regulating valves are not exposed to clogging from mud, while the vat itself protects the drip from being blown out of the flume. Since the unit stands high enough to afford flow into the flume, it is well above access from the ground. To provide means for handling materials to the vats, a walkway of special non-skid plate is carried across both sides and one end of the unit, being carried on brackets at the proper height to make stirring and sampling of the contents as easy as possible.

One of the main vats and two of the smaller ones included in the unit are shown here, with the quadrant of perforated metal in each corner to prevent clogging of the outflow line by slugs of unmixed materials. The pipe entering each of these screens is the fresh water feed, so placed as to give counter-flow washing to the screens as each section is refilled for mixing a new batch. The steam line is free to expand within the U-shaped supports without binding or subjecting its fittings to extra stresses.

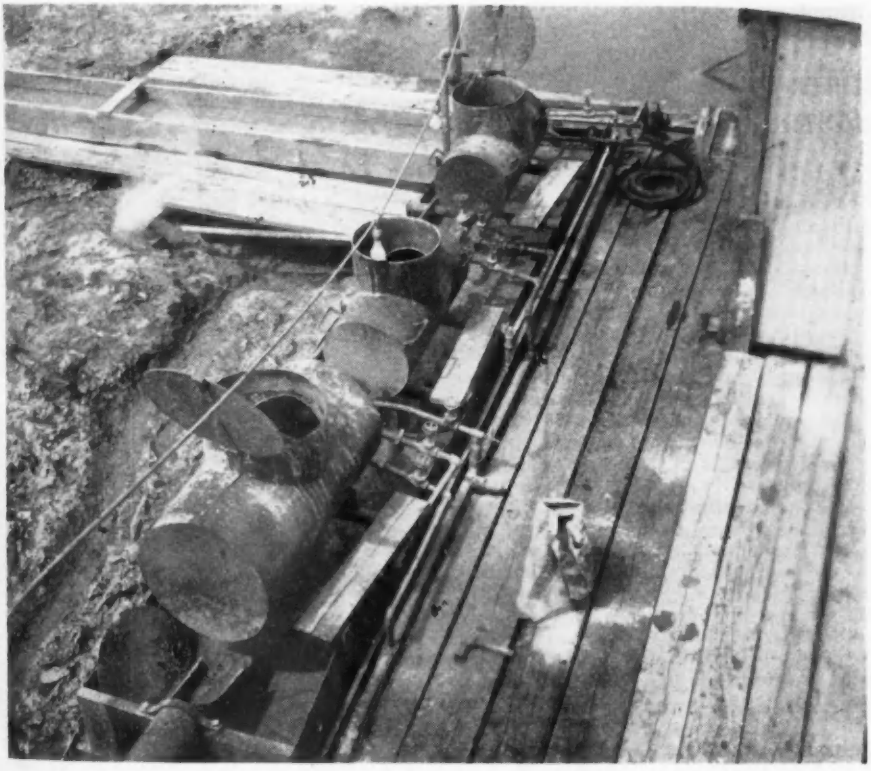
Arrangement of Steps

Two flights of steps are provided, both being of steel, with non-skid treads. The top step of each is attached to the walkway with narrow strips of steel, these being burned through to permit handling the steps as separate units when on the move. A hand rail is provided for the flight up which bags and drums of chemicals must be carried, while the other flight, leading from the platform around the mud engineer's shack, is without railings to afford better clearance at that point.

With the steam line carried in brackets, and the water line supported outside the flange which prevents splashing of the materials onto the walkway, the entire contents of the vat may be protected against dilution by rain by sliding a cover over the steam line. The cover should have properly spaced notches to clear the cold water feed lines into the curved screens if complete seal is desired.

To eliminate the need for passing a winch line around the tank itself for lifting, each end is equipped with a bail which folds back against the end plate, but which, when raised permits a line to be passed through both eyes and hooked up to form a lifting loop which does not place any part of the unit under crushing stresses.

A long handled hoe, kept atop the vats, provides for clearing the guard screens of any material which may bank up on them, and aids in clearing from the steam lines the materials which tend to cake on it due to the concentration of heat there.



These three cylindrical mixing units, strung along the length of the mud flume, actually have less capacity than the single rectangular vat which supplants them, and are not as readily cleaned between batches, nor do they lend themselves to accurate measuring of the fluid for exact proportioning of the ingredients preliminary to introduction into the mud stream.

Rollers Under Suction Hose Permit Slight Shift Without Stretching Material

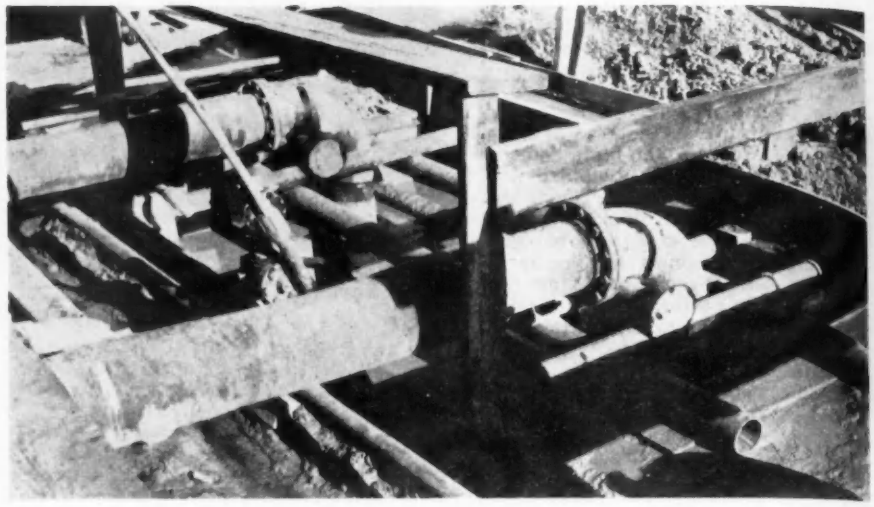
Lengthening the life of the mud pump suction hose by providing free movement along a pair of short pipe rails supported above the mud sump was easily accomplished by the drilling department of one company.

MUD PUMP SUCTIONS

On the under side of each 90-degree elbow supported over the mud pit is welded a short length of pipe through which is thrust a roller consisting of a longer axle of smaller pipe. To the outer ends of each roller are welded a light steel discs which serve as a stop to prevent lateral play of the roller unit.

General support of the unit is accomplished with two lateral pipes laid across the length of the pit, pairs of shorter and smaller pipes serving as rails being spot-welded at the point where elbows turn downward into the mud pit. Constant vibration of the hose, caused by pump pulsation cannot be avoided, and if curtailed by lashing or by other means, some local portion of the hose must suffer the vibration which would intensify the wear. By allowing free movement of the suction head, vibration will then be spread over the entire length of the hose with consequent increase in life.

The play of the rollers on their supports is slight, and does not require lubrication—it being necessary only to turn the roller occasionally to prevent all the wear being concentrated in a small area of the contacting surfaces. Where lubricant is used, it is of the heavy, highly adhesive type to prevent mud contamination.



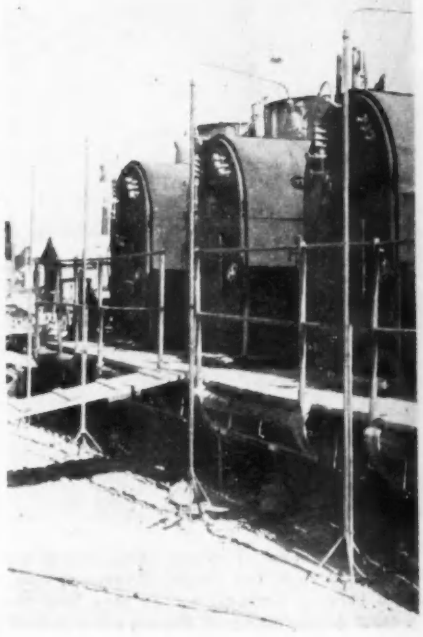
Unitized Standards Carry Boiler Lighting Circuits

Expediting the work entailed in rigging up lighting fixtures for illumination of the boiler setting, the conduit and lighting standard system utilized by one company is both efficient and time-saving.

BOILER LIGHTING

Instead of rigging up overhead lines as is commonly done, a number of tall standards built in the shop of light pipe are set up in front of the individual boilers, one for each unit. Conduiting, complete with outlet boxes, one of the latter for each standard, is strapped to the under side of the skid bases of the units, thus being available for hooking into the rig lighting system almost as soon as the boilers are spotted on the well site. The light cords, extending through the pipe standard, are plugged into the handy outlet boxes beneath the front of the units.

The standards are as tall as the boilers, and together with a horizontal conduit reaching more than half way across the intervening space to the boiler face, provide excellent illumination, spreading an even flood of light over every part of the boiler fronts and some of the controls on the sides. The tall, slim standards rest upon light 3-legged bases made of sucker rod material, the latter being welded into a collar at the lower end of the single upright pipe. Supplemental support for these light bases is provided by lashing the standard at two points to a short length of sucker rod driven a short distance into the ground. This entails a slight amount of extra work at this point in spotting the standards, but it is more than offset by the complete lack of extra rigging-up of wiring systems strung overhead, and the ease with which the standards may be disassembled for easy transportation from one location to another.



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This is one of the complete line of Penberthy gages that meet every liquid level gage requirement.

See Pages 2450 to 2455, Composite Catalog

PENBERTHY INJECTOR CO.

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DRILLING HINTS

Utilizing Space Under Racks Protects Tubing

Drilling departments of some of the drilling companies have incorporated improvements in pipe racks that have helped to speed operations and eliminate much of the lost time formerly lost in certain of the rig operations. An excellent example of this is contained in the rack shown where, in addition to supporting drill pipe the unit is designed also to carry in its lower "deck" a quantity of the smaller sizes of water and utility pipe. Such pipe always is in demand on setting up a rig as well as during subsequent cementing and other special operations demanding additional pipe lines.

PIPE STORAGE

Stored in this manner, no additional rack space is required at the location for such miscellaneous tubular material, yet they are available at all times. To the left of the rack may be seen another feature which is meeting with success, a fitting marking the end of a pipeline permanently assembled with racks and which is used for speeding cementing operations. When it is more expedient for the service trucks to set up for operations beside the rig floor, they may station themselves beside the racks, yet be provided with necessary lines connected to the rig floor fittings. With proper spotting of unions in the lines, racks may be broken down and transported without necessitating tearing out of such service lines every time rig is moved.

Portable Mud House Simplifies Rig Set-Up

On a majority of drilling rigs the mud-testing equipment is set up at any convenient point alongside the mud ditch and usually with little or no shelter or permanent means of protecting it from weather or other injury. One company saves installation and at the same time insures protection of equipment at each location by assembling all testing equipment inside a small, compact shelter which can be picked up by a crane and carried as a unit from one location to another. It is a simple frame structure covered over with corrugated iron, with exception of the front side, and having an overhanging roof at the front which shelters the workman when he is engaged inside.

MUD TESTING

Speeding and simplifying the work of conducting mud tests, the unit has a complete sink, water tap, lighting fixtures and small storage cabinet. When set up at a new location, all that is necessary is the connection of handy exterior water, light and drain fittings to make it ready for service. Instruments, clock, charts and other loose equipment can be taken down for moving and stowed in the spacious cabinet.

You can Reduce the Danger of Cementing Failure by always specifying and using

BAKER
Cement
Wash-Down
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Float Shoes

★ Floats the casing safely down the hole.

★ Whirls the cement *all around* the casing.

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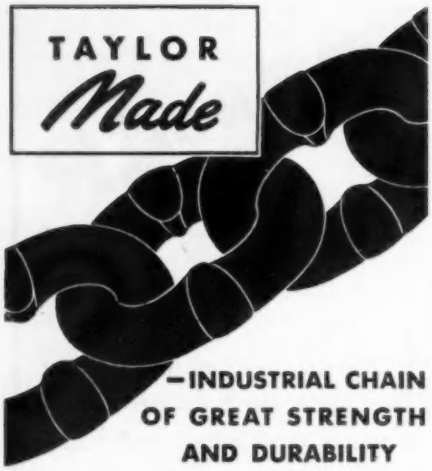

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Portable Grinder Speeds Tool Reconditioning at Rig

TOOL UPKEEP

One of the handiest tools about the drilling rig of one company is the small portable grinder and stand shown. It accompanies every drilling job and usually is set up beside the change house or some other convenient point where the unit may be plugged into an electrical outlet. The stand consists of a 3-foot length of 5-inch pipe mounted atop a broad flat steel base. Mounted on the upper end of the post is a similar rectangular plate or shelf upon which the grinder unit is mounted. Hinged to the back side of this upper plate is a metal cover which is lowered over the grinder when the latter is not in use, and which protects it from dust and mud splashes. Mounted on the front of the stand are a switch and a small sheet metal box in which may be kept goggles, small tools and similar equipment.

This tool is put to many and varied uses, chief among which are the sharpening of small tools and minor repair or weld-finishing work which might otherwise require a special trip back to the shops. Its relatively small cost of installation and ease of moving from one location to another have repaid its original cost many times over.

Being self-supporting on its wide base, it does not trespass on the already crowded floor.

Supplemental Wiper Prevents Mud Contamination

MUD SAVING

To prevent contamination of the mud by wash water used to hose down the rotary table and derrick floor, and also to eliminate the possibility of any foreign articles—such as carelessly handled tools—from finding their way down the hole, one drilling contractor keeps a drill pipe wiper in place atop the blowout preventer assembly throughout the drilling program. The wiper simply rests on the upper end of the spool during drilling, spinning with the pipe and lubricated sufficiently to prevent undue wear by mud wiped from the string when a connection is made.

When the string is hoisted the wiper rides the line upward until it contacts the base of the drive bushing, being forced against this unit as a pipe protector or tool joint passes through it, and then dropping back for the passage of smooth pipe. When the string has been pulled to renew the bit, the wiper usually remains in place while the new bit is stabbed through it, although one of the crew comes below to check against its shifting.

The wiper also prevents the entry of hardened mud chunks into the casing when the substructure is being hosed down, and thus eliminates an occasional cause of trouble down the hole.

DRILLING HINTS

Extension Speeds Tightening of Derrick Tie Bolts

RIGGING-UP DERRICK

The bolts which connect the base of the derrick leg and the upper member of the substructure are frequently so enclosed by flooring, pipes and the corners of the floor railing that it is difficult to tighten them properly. The use of socket wrenches on the nuts, with the bolts inserted from below the junction to facilitate make-up, simplifies the job, but the sockets have a way of disappearing when most needed, and the assembly is delayed.

One drilling superintendent, confronted by this problem, solved it by having welded to the heads of the bolts extensions which would engage the flanges of the substructure columns, and thus do away with back-ups. The nuts, made extra deep to insure against having exposed threads at the top of the bolt, had welded to them cylindrical extensions long enough to come above the level of the derrick floor. Holes drilled through this extension, on 60-degree settings so as to provide six points of application for each complete turn, admit the end of a pin bar which, offset to clear the floor, permits leverage to

be applied to set the nuts tightly against the base plate.

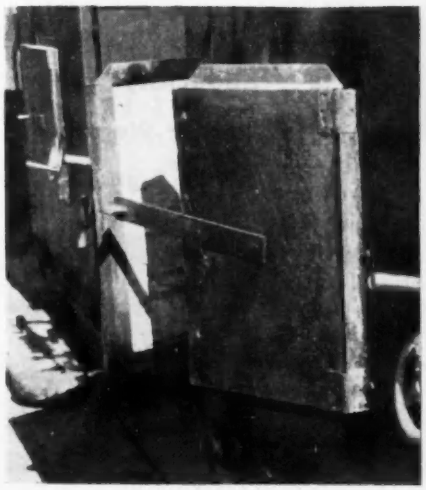
The pin extensions are out of the way, the ends of the bolts are protected against dirt, rust and possible damage, and the assembly of the juncture is speeded, all through the simple conversion of the nut.

Insulated Doors Prevent Heat Loss Toward Pump Skip

FIRE DOOR SHIELDS

Proper and thorough insulation of boiler shells can go far toward increasing the heat efficiency of a steam-powered drilling rig and it is the elimination of all possible surfaces from which heat might escape that prompts some companies to cover even the fire-box openings in their high-pressure boiler settings. Double-opening doors made of light sheet metal welded to angle iron framework are hung on hinged brackets bolted to either side of the opening.

The convex doors, handles and hinges of the firebox door usually discourage mounting of an efficient insulated cover, but the flush-mounted installations shown are simple to construct and lend no interference to normal operation of the firebox door, other than to cause the outer double doors to be swung back. With angle-iron sides mounted so their flat surfaces come flush with the surface of the main insulating sheeting, sufficient room is left inside the small doors for a thick sheet of insulating material. A simple, positive latching bar attached to the door surface sheeting effectively holds the closed doors together, permitting little escape of heat.



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5 — Sizes — 5

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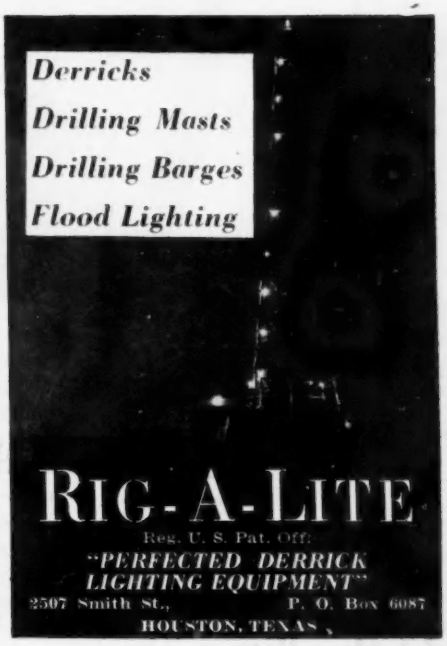

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Under the Severe Operating Conditions
of Tomorrow's 20,000 Ft. Wells

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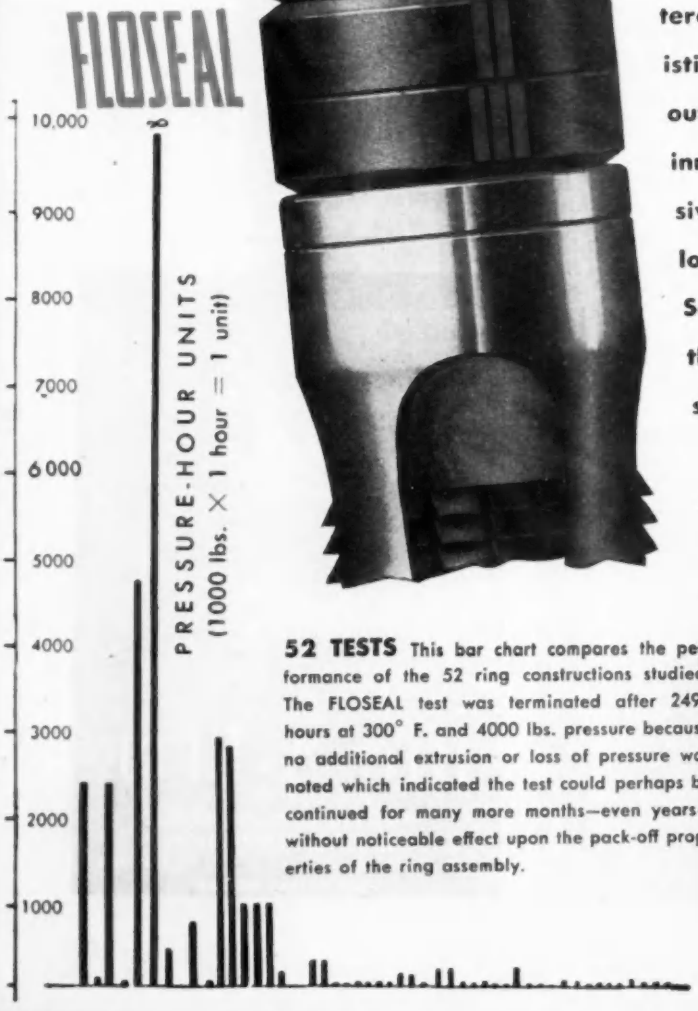
For complete details and recommendations about Olympic Packers equipped with Floseal Packer Rings, call or write your nearest Lane-Wells Branch Office.

Tomorrow's Tools—Today!



52 TESTS This bar chart compares the performance of the 52 ring constructions studied. The FLOSEAL test was terminated after 2496 hours at 300° F. and 4000 lbs. pressure because no additional extrusion or loss of pressure was noted which indicated the test could perhaps be continued for many more months—even years—without noticeable effect upon the pack-off properties of the ring assembly.

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The Outlook

Developments in techniques which had to be perfected in order to produce the atomic bomb which brought Japan to her knees will have its repercussions in the oil industry, specifically in refining and gas processing. Still enveloped in military secrecy, the advances include improved pumping, more efficient heat exchangers, mass spectroscope (continuous analytical control) possible new methods for separating gas mixtures and better automatic control.

* * * *

To use or scrap the Big Inch pipe lines will be a major subject of controversy in Congress, where some members see a plot on the part of industry to buy up the lines at ten cents on the dollar, possibly to use them for natural gas transmission. The fight already is under way, precipitated by the Reconstruction Finance Corporation's announcement that it will empty the lines and take them out of service. (See pages 73 and 78.)

* * * *

Congress is demanding that demobilization procedures of the Army and Navy be speeded up, and is particularly critical of the Navy's refusal to give special consideration to skilled men badly needed by industry.

* * * *

The wartime partnership of the government and the oil industry proved so effective that suggestions are being made that it be continued into the peace in order to spur immediate application commercially of processes developed during the war.

* * * *

Demands of labor for wage increases is threatening the administration's price-control program and, if granted, may set in motion the spiral of inflation which the government has been fighting for the past five years. Economists contend that without wage stabilization and rationing, the government is not in a position to hold the price line.

* * * *

Industry next month will offer sharp opposition to legislation creating a single federal agency to co-ordinate all government scientific research. Objections to the plan will be made known before a Senate committee when hearings start on the measure. Major contention of industry is that the government might conceivably get into fields in which private organizations are working and pave the way for compulsory licensing of patents.

* * * *

Continued strikes in the automobile industry can eventually affect the production of crude oil in the United States. Until the automobile industry turns out enough cars to return the nation to its normal motoring capacity, the civilian consumption of gasoline will remain at a low level meaning a subnormal civilian demand for crude oil.

* * * *

Independent oil men want immediate cancellation of OPA crude oil price ceilings to permit buyers to make good their promise of early 1942 to increase crude oil prices at least 35 cents a barrel. Such an increase would, they say, assure healthy reconversion for the industry.

* * * *

If present stride in cutting production costs of synthetic rubber continues the oil industry may become a serious threat to the natural rubber industry. Synthetic rubber is now being produced for as low as 11 cents a pound compared with 31 cents a pound in 1944.

* * * *

SAE Journal authors suggest application to commercial vehicles of water-alcohol injection to produce greater power from lower-octane fuels. Best gains result from fuel 12 octane numbers lower than engine requirement.

The Week's News

THE oil price situation was definitely in the forefront in Washington last week, with reports coming in indicating that exploration and development were slowing down due to uncertainty over the price of oil in the immediate future.

Stripper Well Subsidy—A determination by the Reconstruction Finance Corporation as to whether there is any legal foundation for peacetime payment of the stripper and high-cost well subsidies may have a definite effect on OPA policy on ceilings. Page 67.

Future of Emergency Pipe Lines—Questions of price also were seen evolving from the RFC's decision to discontinue operations of the war emergency pipe lines, with some members of Congress charging that the major companies were anxious to avoid having the Big-Inch lines transformed into common carriers. Congress will have more to say on the subject in the near future, when committees go into the question of disposal of surplus government facilities. Page 72.

Anglo-American Oil Pact—American and British officials sat down in London during the week to discuss the long-pending Anglo-American petroleum agreement, with Administrator Ickes, legal head of the United States delegation, confident that the new version worked out in Washington during the past year will prove acceptable to the British government.

PAW Directive 59 Revoked—PAW announced the revocation September 30 of the importation and distribution controls of Directive 59, possibly paving the way for law suits to determine the compensation due companies which were short-supplied as a result of the regulation. Page 67.

Tax Relief Plans—More suggestions for tax relief went to Congress during the week, in a report by the committee on postwar tax policy urging immediate repeal of the excess profits, capital stock and declared value excess profits tax, and gradual reduction of the corporate normal tax and surtax until a 50 percent cut in present rates has been achieved.

International Oil Race—A race is under way in all sections of the world, with most of the free major nations and many of the smaller ones seeking to develop new oil resources, either to cash them in to provide highly essential foreign exchange or to make themselves more nearly independent of imports. United States companies are preparing for or already engaged in widespread operations. Story below.

Submerged Land Titles—Legislation resolving the long-standing controversy over the ownership of the underwater oil lands on the Pacific and Gulf Coasts moved a step further toward enactment with passage by the House of a bill declaring title to lay with the states. Page 69.

FPC Natural Gas Hearing—FPC hearings on natural gas started in Kansas City with question of uses, exportation, reserves given much attention. Coal and railway interests are watching every move closely. Page 70.

Effects of Refinery Strike—Production and transportation of crude oil likely would be affected by any extended strike of refinery workers. Settlement will be attempted by federal conciliation director. Page 68.

Conventions Get Started—Gatherings of oil men in various conventions will get underway next week with drilling contractors meeting in Oklahoma City (page 73) and IPAA's first postwar membership meeting in Tulsa in mid-October. Page 69.

Disposal of War Plants—RFC reports 157 war plants have been sold or leased with negotiations at "an advanced stage" on many more. Page 67.

War's End Sees Plans for Intensive Oil Exploration in Foreign Nations

End of the war has unleashed an international race for exploitation of world oil reserves. Most of the major countries and many of the smaller ones have started or are planning ambitious discovery and development programs, some to bolster up their war-depleted internal economies, others to make themselves more nearly self-sufficient in the very life blood of modern warfare.

In the Far East the British and Dutch are starting on the rehabilitation of fields recovered from the Japanese, and the Dutch are planning exploration in Netherlands New Guinea, the western half of the island until recently occupied by the sons of Nippon.

Russia is engaged in extensive development, about which little information is leaking out to the rest of the world, China plans development of fields which are believed to be potentially major, Canada drillers are going into western Canada and oil drills are bringing life to the shores of the Dead Sea. Considerable work is planned in Egypt, where the seismograph reportedly fails of the efficiency it has achieved in other areas.

American oil companies are reported to plan exploration and development operations in nearly a score of countries. Highly incomplete reports indicate that nearly 2000 wells may be drilled within the next year, with 300 of them wildcats. Indications are that the American companies, at least, will go ahead with their exploration programs but there is some doubt, because of various factors, how far development operations will be carried.

Such information as is available is based on plans made before the capitulation of Japan when it was believed that the wartime controls would be eased off gradually, affording a breathing spell for planning for postwar work. The sudden end of the war, and the impetuous dismantling of the wartime structure, served to change the picture somewhat. Questions of price, of Navy demand and other factors entered into the equation.

Experienced oil men in Washington believe it is almost certain that American and other companies will go ahead with their exploratory programs, but it was said the companies themselves are not sure just what the situation will be on exploitation.

Reports on proposed programs reaching PAW and other agencies in Washington show the following picture, but it must be borne in mind that these plans were made weeks and months ago and now are subject to change in the light of changed conditions:

Bolivia: 15 field wells planned.

Brazil: 11 field wells scheduled.

Chile: 3 wildcats proposed.

Colombia: 13 companies plan 53 wildcats and 163 field wells.

Cuba: 2 companies have 3 wildcats.

Dominican Republic: 2 wildcats scheduled.

Ecuador: 10 wildcats and 45 field wells planned.

Haiti: 2 wildcats proposed.

Mexico: 14 wildcats and 47 field wells programmed.

Nicaragua: 1 wildcat expected.

Peru: 42 wildcats and 126 field wells scheduled.

Trinidad: 26 wildcats and 133 field wells proposed.

Venezuela: 11 companies plan 72 wildcats and 512 field wells in the eastern and 6 companies plan 46 wildcats and 202 field wells in the western part.

Western Hemisphere Total: 281 wildcats and 1261 field wells.

Egypt: 4 companies plan 16 wildcats and 28 field wells.

India: 2 companies schedule 1 wildcat and 67 field wells.

Iran: 1 company plans 3 wildcats and 8 field wells.

Iraq: 1 company plans 2 field wells.

Saudi Arabia: 1 company programs 2 wildcats and 4 field wells.

United Kingdom: 2 companies plan 27 wildcats.

Eastern Hemisphere total: 49 wildcats and 109 field wells.

It will be noted that the programs reported to Washington do not include projected operations in former enemy or enemy-occupied countries in Europe, where undoubtedly extensive exploratory and development work, will be undertaken.

Fifteen American oil and drilling companies are known to be interested in foreign projects—Gulf Oil Company, Colombia Petroleum Company, Standard Oil Company of California, Asiatic Petroleum Corporation, The Texas Company, Phillips Petroleum Company, Standard Oil Company (New Jersey), Socony-Vacuum Oil Company, The Atlantic Refining Company, Arabian-American Oil Company, Sinclair Oil Company, Orinoco Oil Company, Barnsdall South America Corporation, Loffland Brothers Company of Venezuela, and The Drilling and Exploration Company.

PAW Lifts Directive 59 Effective September 30

Controls on the importation and distribution of gasoline, kerosine and fuel oil in the East Coast states imposed by Directive 59 were lifted last week by PAW, and will be followed in the near future by the revocation of the remaining provisions of the directive, including definitions, price formulas, zone boundaries, etc.

The directive was amended to set up the machinery necessary to bring the supply and distribution program to an orderly close, one new section providing for an accounting method by which original suppliers in each zone established by the directive shall make any necessary adjustments among themselves occasioned by inequalities of allocations of products.

The lifting of the controls was made possible by assurances that enough ocean-going tankers will be available by September 30 to transport to the East Coast, together with deliveries by the War Emergency Pipe Lines, sufficient quantities of crude and products to meet all needs. Since the rates now charged by the pipe lines are competitive with tankers, scheduling and distribution no longer is necessary.

There were indications that the adjustment of accounts on the oil and products move under the directive during the three years of its application will prove difficult. Company lawyers already are engaged in the preliminary statistical work which will be necessary to show the position of each supplier, preparatory to submitting claims on behalf of companies who suffered under the distribution schedules.

The revocation of controls will take effect September 30, and a provision of the amendment stipulates that any supplier who fails to accept title to any quantity of product allocated to him by the close of business October 10 will forfeit the property, which then shall remain the property of the supplier against whom the assignment was issued.

RFC Progress Report Shows 157 War Plants Already Sold or Leased

The Reconstruction Finance Corporation issued its first progress report on the disposal of government-owned war plants September 21, showing that 157 plants costing over $1 billion have been sold or leased or had reached an advanced stage of negotiations on September 1. The report also disclosed that preliminary negotiations are under way with respect to 469 plants costing approximately $2,750,000,000.

So far, the RFC reported, 34 plants costing $45,155,000 have been sold for $33,552,000, including Terminal Refining Corporation aviation gasoline refinery at Corpus Christi, Texas, which was sold to that company (the war-time lessee) at the cost price of $1,514,851.03.

Sixty-two plants costing the government $285,182,000 have been leased, including the $4,480,000 refinery operated by Root Petroleum Company, at El Dorado, Arkansas; the $17,453,000 plant operated by Ashland Oil and Refinery Company at Catlettsburg, Kentucky; the $11,057,785 plant operated by Continental Oil Company at Ponca City, Oklahoma, and the $15,900,000 refinery operated by Utah Oil Refining Company at Salt Lake City. All of the oil plants were leased to the companies which operated them during the war.

Lessees of 16 other plants costing the government $36,677,000 have indicated to the RFC their intention of purchasing the properties under option agreements, including J. S. Abercrombie Company and Harrison Oil Company who will take over the $28,573,734 plant at Sweeny, Texas.

Negotiations were at an "advanced stage" September 1 for the sale or lease of the 100-octane gasoline plant at Coffeyville, Kansas, built at a cost of $6,673,000 and operated during the war by the Cooperative Refinery Association; the $15,745,000 100-octane refinery at Pasadena, Texas, operated by Crown Central Petroleum Corporation, and the $15,900,000 100-octane plants at Salt Lake City, Utah, and Laramie, Wyoming, operated by Utah Oil Refining Company.

"Interest Shown"

Plants in which one or more parties have expressed an interest to buy or lease include the Catlettsburg plant leased to Ashland Oil and Refining Company; the $1,325,630 plant operated by Continental Oil Company at Ponca City, Oklahoma; the $11,949,873 plant operated by Eastern States Petroleum Corporation at Houston; the $1,078,204 Houdry Process Corporation plant at Paulsboro, New Jersey; the $9,872,407 plant at Houston and the $158,398 plant at Culver City, California, operated by Hughes Tool Company; the $3,376,949 plant operated by Magnolia Petroleum Company at Beaumont, Texas; the $425,891 Minerva Oil Company plant at Cave-In-Rock, Illinois; the $6,800,000 Premier Oil Refining Company plant at Cotton Valley, Louisiana; the $8,753,687 plant operated by Reed Roller Bit Company at Houston; Root Petroleum Company plant at El Dorado, Arkansas; the $12,103,970 plant operated by the Southport Petroleum Company at Texas City; the $7,916,915 Standard Oil Company of California plant at El Segunda, and the $8,249,300 plant operated by Wilshire Oil Company at Norwalk, California.

The 642 plants covered in the report represent something less than half the total number of government-owned plants which the RFC is endeavoring to dispose of, it was stated.

OPA Fears Subsidy Removal Would Mean Riot of Prices

Fate of the stripper well subsidy depends upon a determination by RFC as to the legal basis for payments, now that the war is over.

Doubts of RFC officials as to the legality of the subsidy developed in the face of a plea by OPA officials that it is tied to ceiling prices and should be continued as long as price control is maintained.

The subsidy originally was adopted to prevent the shutting in of large numbers of stripper and high-cost wells whose owners were in the red on operations under the crude ceiling prices, the legal foundation for the use of government money being the contention that the oil so produced was essential to the conduct of the war.

More recently, however, OPA has tied the subsidy to the ceiling prices and has taken the position that as long as the latter was maintained the payments should be continued.

OPA officials fear that elimination of subsidy payments would result in a drive for abandonment of price control which could not be resisted, and have said frankly that if the removal of control would result in higher prices they did not want to take it off.

Independent interests at the moment are undecided as to their next step in their long fight against the ceilings, although they are still determined to press for their removal at the earliest possible date.

They take the position that the ceilings will become more unbearable as production is cut back to meet new conditions, but agree that cut-backs must come if dangerous over-supply is to be avoided.

What will happen to the stripper and high-cost wells which have been receiving government aid is the question.

Present indications are that all activities on price control will be suspended pending a decision by the RFC whether it can continue the subsidy.

Federal Conciliation Service to Make Effort To Settle Oil Labor Troubles

Oil Company officials and representatives of the Oil Workers Union (CIO) have agreed to meet in a midwestern city in an effort to settle labor disputes confronting the refining industry and which have threatened to flare back into the producing fields and tie up large segments of the oil industry.

Announcement of the meeting by company and union officials was made in Washington by Edgar L. Warren, new federal conciliation service director.

Not only are refineries, synthetic rubber plants and chemical plants being shutdown by idle workers but the labor disputes are expected to extend into the pipe line department causing a possible tie-up of the industry's transportation system unless the disputes are settled immediately. Reduction in daily oil production would eventually result, especially along the Texas Gulf Coast and other fields which feed the coastal refinery district.

Shutdown of marginal wells making water along with the oil was a matter of much concern to the oil company officials. Once shutdown, these wells are difficult to return to production.

Effect on Motorists

There is some disagreement as to the affect of a general strike in the refining industry on the motoring public. At the present time the labor disputes do not involve all independent refineries and at least one major company refinery. Refinery executives say the present situation may cause some pinch on civilian gasoline and that refineries not affected probably will be able to furnish enough gasoline provided the strike does not halt deliveries of oil products.

Under present non-ration consumption rate, oil company officials say there are about 30 days supply of civilian gasoline in storage and this does not include military stocks.

Union Demands

A wave of strike votes started after some oil companies had offered 15 percent increase in earnings and a 40-hour work week. The union countered with demands for a 40-hour work week with 52 hours' pay, a 5-cent per hour premium for workers on the 3 p.m. to 11 p.m. shift and a 10-cent per hour premium for the 11 p.m. to 7 a.m. shift, a retirement plan to be approved by the union, and a closed shop.

The Houston-Texas City-Beaumont-Port Arthur refining district was the hardest hit with approximately 14,000 employes idle, 5500 persons slated to walk out, and additional thousands of workers voting on strike commitments.

Plants in the coastal area already affected by strike votes include Sinclair Oil Company, (Sinclair Rubber, Inc., Houston Pipe Line Company, Sinclair Pipe Line Company, The Texas Company, Shell Oil Company, Crown Central Petroleum Corporation, Pan American Refining Company, and General American Company.

At Port Arthur, 7 plants were shutdown including The Texas Company, Gulf Refining Company, Pure Oil Company, and The Atlantic Refining Company.

In the midwest, 500 workers walked out at Socony-Vacuum Oil Company's plant. Another 500 workers were out in the Detroit area, 300 at Socony-Vacuum's Trenton plant and 200 at Refiners Transport and Terminal Corporation.

Late last week, 500 Cities Service workers in East Chicago went out and 400 left Pure's plant in Toledo.

At Fort Worth, President O. A. Knight of the Oil Workers Union declared "the fire is started and I'm afraid it'll spread rapidly throughout the nation."

Governor Coke Stevenson of Texas has indicated that a firm hand would be used to prevent violence as a result of the oil industry labor disputes along the Texas Coast. He said full police powers of the state would be used to prevent destruction of property or hazard to the life of any citizen.

Washington Activities

In Washington, President Truman moved to halt the labor revolution, transfering to the Department of Labor the functions and powers of the War Labor Board, War Manpower Commission and United States Employment Service and announcing that other agencies concerned with labor would eventually be consolidated in the department.

Armed with new authority, Labor Secretary Lewis Schwellenbach moved into the Detroit area, where the automobile industry is faced with a complete shut-down, in an attempt to conciliate the controversy.

Bureau Transferred

The President also transferred the Office of Economic Stabilization to the Office of War Mobilization and Reconversion. Stabilization Director William H. Davis later resigned. Withdrawal of independence from the OEC came ten days after Davis had stated it was the administration policy to raise wages 50 percent in five years without raising prices. Asked about that statement at a press conference September 18, the President said that Davis was not speaking for the administration.

Discussing policies of the newly revitalized Department of Labor, Schwellenbach said that the government still could seize strike-bound industrial plants but asserted that seizure is not his policy and would be resorted to only in an extreme situation.

Pay Increases Announced By Major Oil Companies

Increases in base pay and shorter hours for oil industry employes have been announced by some major oil companies.

The Texas Company will return to a 40-hour week and will raise basic wages 15 percent to compensate for loss of overtime, W. S. S. Rodgers, chairman of the board, has announced. The policy will apply to all earning up to $7800 annually, with individual consideration for those above that level.

Employes of the Shell Oil Company west of the Rocky Mountains will return to a 40-hour week effective October 1 with an increase in base pay of 15 percent for all monthly-paid employes who receive up to $300 a month, and lesser increases on a gradual scale for those making above $300 per month. This plan also is being studied for Shell employes east of the Rockies.

Effective October 1, employes of The Carter Oil Company will go on a 40-hour work week with a concurrent increase of 15 percent in base salaries. The order applies to all field and office personnel. Carter will put an eight-hour, five-day week into effect with offices being closed Saturdays.

Plans for a general increase of 15 percent in the base pay of salaried employes and wage earners and for reduction of the work week to 40 hours were announced by Standard Oil Company (Indiana).

The contemplated increase in wages and salaries, said a statement by Robert E. Wilson and A. W. Peake, top executives, is the largest the company has authorized in many years.

Nearly all the company's 20,000 employes will be entitled to the benefits of the changes. The pay increase is to apply generally to all employes earning not more than $600 a month, and a policy of granting suitable increases to others earning more than that amount is to be applied to reward merit and to correct inequities.

Texas Well Permits

The Texas Railroad Commission last week approved permits for drilling 154 new wells in Texas. While this is a decline from the week preceding, it is still an increase of nearly 50 percent over weekly reports filed during the war.

There were 45 locations in Southwest Texas, 41 in North Texas, 23 in West Texas, 13 on the Gulf Coast, 12 from the Panhandle, 12 from West Central Texas, and 8 from East Central Texas.

To Lease River Bed

The Sabine river bed, where it passes through the Carthage field, Panola County, Texas, soon will be offered for lease by the State School Land Board. Land Commissioner Bascom Giles estimates that 500 acres will be available over an area between 12 and 15 miles long.

House Passes Bill Relinquishing Federal Claim to Submerged Lands

By a vote of 108 to 11, the House on September 20 passed legislation relinquishing all claims of the federal government to the ownership of tidelands and lands under navigable waters, after defeating by a vote of 17 to 105 an amendment proposed by Representative Sam Hobbs of Alabama which would have given the United States rights to underlying oil while vesting to the states the ownership of the surface lands.

There was lengthy debate on the measure although as shown by the final vote, little opposition. During the debate it was emphasized that neither the Secretary of the Interior nor the Attorney General had appeared before the House Judiciary Committee during its hearings, to oppose the legislation. The Department of Justice has a suit pending in California to test the title to underwater oil lands, initiated on the recommendation of the Interior Department.

The legislation, which now goes to the Senate, is designed to quiet a controversy which has raged at intervals over the period of nearly a decade over the ownership of the offshore oil lands. The first move to exert government ownership over such lands was made eight years ago in legislation which a House committee refused to report to the floor.

It was pointed out that the recent moves of Secretary Ickes to obtain the lands for the federal government has served to cloud titles to underwater lands not only along the coasts but throughout the country generally because of the implication that if offshore lands were feredal property, lands under navigable waters also were.

The Texas congressional delegation was urged by the state school land board to support this legislation.

Governor Coke Stevenson, Attorney General Grover Sellers and Land Commissioner Bascom Giles in a telegram to Representative Hatton W. Summers declared that the legislation (HJR 225) was absolutely necessary for full development of public school lands in Texas.

Texas owns 3,250,000 acres of submerged lands and 1,093,000 acres of vacant lands including river bed areas.

District 3 Offices PAW To Close on September 30

District 3 offices of the Petroleum Administration for War, Houston, will close September 30, W. M. Averill, district director-in-charge, has announced.

Averill said the closing is in keeping with oft-repeated statements by PAW officials that the agency would remove oil industry controls and fold up as quickly as possible after the war.

Charles F. Roeser of Fort Worth and chairman of the District 3 general committee praised the work of District 3 executives.

Price Increases Allowed By OPA for 14 Oil Pools

Increases ranging from 20 to 35 cents a barrel have been granted by the Office of Price Administration in the ceiling prices of 14 pools effective as of September 1, as follows:

Arkansas: Garland City, 35 cents.

California: Torrance "34," 20 cents.

Illinois: Boos, north, 20 cents; Clay City, west (McClosky), 20 cents; Maple Grove, east, 35 cents.

Kansas: Beaumont, north, 35 cents; Box Berger, 35 cents; Jobes, 35 cents; Kraus, 35 cents.

Louisiana: Lake Barre, 35 cents.

New Mexico: Barber, 27 cents; PCA, 35 cents; Salt Lake, 26 cents.

Texas: Sand Flat (Paluxy), 35 cents.

Texas Hearing October 17

The Texas Railroad Commission has scheduled its next statewide proration hearing for October 17. The October proration order has not been completed last week, was expected early this week, probably on Monday, September 24.

Crude Oil Production in the United States

(Estimates compiled by The OIL WEEKLY. All figures indicate daily averages, in barrels.)

STATE OR DISTRICT	PRODUCTION IN WEEK ENDED Sept. 22	Sept. 15
Alabama	1,000	1,000
Arkansas	78,800	78,800
California	880,200	882,500
Colorado	10,650	10,450
Florida	200	200
Illinois	204,550	201,450
Indiana	13,000	14,850
Kansas	273,450	273,600
Kentucky	28,000	28,750
Louisiana	363,200	362,650
North Louisiana	71,200	70,650
South Louisiana	292,000	292,000
Michigan	51,100	48,80
Mississippi	51,050	53,700
Missouri	100	100
Montana	21,400	21,465
Nebraska	850	850
New Mexico	108,300	108,300
New York	13,850	12,750
Ohio	6,850	6,850
Oklahoma	394,600	392,050
Pennsylvania	35,150	32,200
Tennessee	35	35
Texas	1,882,925	1,882,925
Upper Gulf Coast	467,750	467,750
East Texas Field	315,200	315,200
Rest of Eastern Texas	128,425	128,425
Lower Gulf Coast	217,900	217,900
Southwest Texas	57,600	57,600
South Central Texas	16,150	16,150
West Texas	450,100	450,100
North Texas	141,800	141,800
Panhandle	88,000	88,000
West Virginia	8,100	8,200
Wyoming	113,800	106,800
Total United States	4,541,160	4,529,275

Arrangements Complete for IPAA Membership Meeting

The first postwar membership meeting of the Independent Petroleum Association of America, in Tulsa, October 14-17, will emphasize the numerous problems attendant to reconversion, with the purpose of guaranteeing an adequate and healthy domestic oil industry. Protection of the independent producers in all oil areas against threatened imports of foreign crudes, will be considered.

Discussion also will center on a national oil policy, and its adoption. Ralph T. Zook, IPAA president, now in London, will report on conservations currently in program aimed toward a satisfactory international oil program acceptable to both government and industry.

Directors and state vice presidents will be elected as will a new president to succeed Zook who completes two years as head of the association.

Arrangements for the meeting are in charge of W. G. Skelly of Tulsa, president of Skelly Oil Company. Merle Becker of St. Louis, vice president of W. C. McBride, Inc., is chairman of the program committee.

Robert S. Kerr, governor of Oklahoma, will welcome the delegates at a noon luncheon October 15 with Howard J. Whitehill of Tulsa, president of the National Stripper Well Association, presiding. Merle Thorpe, former editor of Nation's Business, will speak at a luncheon meeting October 17.

Exportation Insufficient Grounds for Permit Denial

The Independent Natural Gas Association of America today urged that in its consideration of the application of the Panhandle-Eastern Pipe Line Company for a certificate to export natural gas to Canada the Federal Power Commission "not be prejudiced because of exportation alone."

The case is now being heard by the FPC in Washington and the association's request was made in a wire sent from Kansas City by the association counsel, Wesley E. Disney, who explained that his participation in the commission inquiry being held in Kansas City prevented his making a personal appearance in Washington to present the association's position.

The wire explained that the association desired to have the following incorporated in the record of the hearing now being held in Washington:

"The Independent Natural Gas Association of America is convinced that known gas reserves of over 140 trillion cubic feet of natural gas warrant its sale in any market available and that such sales will promote conservation of natural gas. The association respectfully urges that an application for a certificate to export natural gas should not be prejudiced because of exportation alone, and the question of granting or denying such application should rest entirely on other grounds."

Fear of Federal Government Control Crops Up at First FPC Gas Hearing

By WARREN L. BAKER, Editor, The Oil Weekly

While much of the testimony presented at the natural gas hearing before the Federal Power Commission in Kansas City last week was devoted to detailed data on reserves, production and utilization of Kansas and Missouri gas, such questions as exportation of gas into other states, and uses to which natural gas should be put, competition between coal and gas, state vs. federal regulation, and fear of the federal government either directly or indirectly gaining control over oil and gas production kept cropping up.

Coal and railroad interests, especially labor groups from these industries, displayed a strong interest in the proceedings. Tom J. McGrath, Washington attorney, representing two coal associations and several railway and coal labor unions, including John L. Lewis' United Mine Workers of America, cross-examined nearly every witness. It appeared that McGrath was seeking information on reserves, costs, uses and regulatory practices that no doubt will be used by the coal and railroad interests when they put their own witnesses on the stand later.

Also taking part by cross-examining some of the witnesses was Alfred G. Goldberg, of the law firm of Padway & Goldberg, Milwaukee, representing 14 CIO labor groups.

In attendance at all the sessions were a number of other representatives of coal and railroad interests. Among these was Willie K. Hopkins, former Texas state senator from Gonzalez, now with the United Mine Workers; and Philip Porter, of Madison, Wisconsin, who was representing the Lake Michigan Dock Association and the Solid Fuels Institute.

Before the hearings of the commission terminates these groups undoubtedly will become more active, and the matter of end uses for natural gas is likely to be aired in a comprehensive manner.

The Kansas City hearing, which ran 3½ days last week and will be resumed September 24 upon return of the commission members from a trip to the Hugoton gas field, is the first of a series of four such hearings. The Kansas City hearing will be followed by similar sessions at Oklahoma City, New Orleans and Dallas. The pattern for the other hearings undoubtedly will follow that of Kansas City, with consumers expressing fear over exhaustion of supplies while state and gas industry representatives present factual data and denounce federal government invasion of the production regulatory field.

State-Federal Relations

The question of state regulation arose at the outset of the hearing, when John B. Gage, mayor of Kansas City, and Andrew Schoeppel, governor of Kansas, testified.

Mayor Gage, the first witness, stressed a strong interest in the conservation of natural gas and the limiting of its use to the Middle West, before suggesting that the primary responsibility for conservation should be left in the hands of states producing gas. Gage, however, believed that the FPC should be authorized to give force and effect to state regulations.

"The decision of the state commission would be presumptively valid and should be so treated by the Federal Power Commission," Gage continued. "I believe that this would reverse a trend of state-federal distribution of power now well established. The state —not the federal government would initiate—the federal government would enforce and aid in administration." Legislation providing such a system would, he added, involve "placing primary responsibility and authority where I believe it should in the first instance rest —that is the local regulatory body."

Next witness, Governor Schoeppel, who appeared as chairman of the Interstate Oil Compact Commission, reviewed the work of the compact and said the progress it had made in conservation "demonstrated the ability and willingness of the states to perform the duties of conservation of oil and gas within their boundaries."

FPC Criticized

The general fear held by much of the oil industry that the FPC will gain control over both oil and gas production was brought into the open by Major B. A. Hardey, independent producer of Shreveport, Louisiana, along with sharp criticism of the commission for attempting to exceed its constitutional authority. Hardey was representing the Oil and Gas Production Committee of the Independent Petroleum Association of America, and introduced into the records a resolution adopted by the committee on August 20, 1945. The resolution declared:

1. No jurisdiction should be conferred upon the PFC or other federal agencies to regulate the production and conservation of natural gas, as this is the vested constitutional right of the state.
2. That competition between fuels should be left to the decision of free industrial economics.
3. That no federal laws governing production of natural gas is needed, states having authority for adequate regulations.

The function of the federal government under the constitution is to regulate interstate commerce and should not go beyond this.

5. That the functions of FPC should be transferred to the Interstate Oil Commerce Commission now controlling transportation of other commodities, or the jurisdiction of the FPC should be limited to interstate transportation of gas, if FPC attempts to control, either directly or indirectly, the production of gas, the price of intrastate gas, or incorporate producing properties in the rate base for determining transmission rates.
6. That FPC exceeds its vested powers and tends to encourage waste of gas when it attempts to give gas producing and gathering properties a utility status, or evaluates producing properties on a cost formula, or extends its jurisdiction to the properties of a producer not in interstate gas business.
7. That the authority of federal and state agencies should be clearly defined to remove confusions injurious to the industry.

Coal's Interest Shown

Hardey's testimony brought sharp questioning from Tom McGrath, counsel for railroad and coal mining labor groups, and also from George Slaff, chief counsel for FPC.

McGrath sought to prove that the coal interests had been granted no special advantages by FPC, while Slaff protested any suggestion that FPC had gone outside of the statutes under which it operates or had erred in fixing the price of gas in the well-head. Commissioner Draper heatedly denied that FPC had never evaluated any gas-producing property, contending FPC had merely taken the original lease cost as shown on company books as its rate basis. Hardey persisted in his belief this practice was unfair and would ruin state conservation programs because the price would be set below intrinsic value.

In answer to a question from Charles I. Francis, counsel for the Texas delegation, Hardey declared that the oil industry feared they would become subject to FPC regulation if they cooperated in the gathering of wasted gas.

Natural gas reserves are not likely to play out in a relatively short space of time, and the outlook for discovery of additional gas reserves is distinctly favorable, E. DeGolyer, geologist and engineer of Dallas, told the commission. He estimated the natural gas reserves of the United States to be in excess of 140 trillion cubic feet as of January 1, 1945, if only those fields having a reserve in excess of 20 billion cubic feet are considered. This is 36 times greater than the current annual consumption of the nation.

"If we calculate these same reserves to a pressure of atmosphere (instead of 16.4 pounds), allow for small fields not included in the present estimate and allow for probable extension of discovered fields not yet fully explored, we are justified in considering our present gas reserves to be something of the order of magnitude of 200 trillion cubic feet.

"In my opinion," DeGolyer continued, "the outlook in the United States is for activity on an increasing scale in exploration of oil. I believe that the result of such effort is likely to be the discovery of substantial reserves of natural gas. . . . It is fairly well established by recent experience that there

FPC STARTS NATURAL GAS HEARINGS

Governor Andrew Schoeppel of Kansas (seated immediately in front of left edge commissioner's desk) testifying before the Federal Power Commission natural gas hearing in Kansas City last week. Seated, left to right at commissioner's desk facing the camera are: Claude L. Draper, FPC member; Nelson Lee Smith, FPC member, and Marvin Farrington, examiner for FPC. Others shown in the photograph are witnesses and legal representatives of various groups from the oil, gas, coal, railway and other industries and labor unions.

is greater likelihood of the mineral hydrocarbons occurring in the gaseous phase than of their occurring in the liquid phase under the relatively high pressures and high temperatures which prevail at great depth. We know that exploration to increasingly greater depths is and must be a marked characteristic of our continued search for oil. It appears to me, therefore, that the outlook for the discovery of additional gas reserves in substantial quantity is distinctly favorable."

Kansas Offers Testimony

Much of the week was spent in presentation of data by the Kansas State Corporation Commission on production and utilization of natural gas. Members of the commission testified as to the development of natural gas in the state, the volume of known gas reserves, production rates and field prices.

Three research chemists, Dr. Benjamin Miller, consultant, of New York; Dr. C. M. Marberg and Dr. P. E. Pratt of Midwest Research Institute, Kansas City, presented details on the kinds of products which may be derived from natural gas and described the processes for accomplishing these. This was done for the purpose of pointing out the significance of natural gas as a raw material source in such work and the influence of such plants on the economic prosperity of the region.

It was brought out that in addition to the manufacture of carbon black, that natural gas components can be used in manufacturing textiles, plastics, rubber and other materials that have hundreds of uses in household, agriculture and industrial operations. Natural gas was declared to have economic advantages over either oil or coal, which could also be used as a base material for all these products, because of its relatively low price. The thought was expressed that higher gas prices would not retard the use of natural gas for these purposes because it still would constitute only a small part of the cost of making commercial synthetic products.

Furthermore it was declared that the heating and lighting value of gas are not destroyed by extraction of the components used in manufacturing synthetics. Despite the widespread part natural gas is playing in the growing chemical field at present not more than one percent of the current daily natural gas production is required.

Week's Final Witness

Technical testimony on the possibility of utilizing natural gas as a raw material in the chemical industry was concluded by the final witness of the week, J. G. Hawthorne, Kansas City Testing Laboratory. He stressed the economic advantages of natural gas over coal, because of lower prices, and declared the development of a chemical industry in the region would make possible the utlization of Kansas natural gas, which would have a marked influence on the general economics welfare of the territory.

"Conservation of the state's natural gas supply," he said, "is highly important, since an assured raw material source is necessary to attract such plants to the region."

Greek L. Rice, attorney general of Mississippi, and Alec Crowell, state petroleum consultant asked that the FPC hearing date for Mississippi be in January and the hearing be held in Jackson. Commissioner Smith indicated that the request would be granted if at all possible.

International Control of Middle East Said Favored

The London Times September 18 asserted that Great Britain did not seek to bar American oil companies from the Middle East but favored making the region's oil available to all powers under intrnational control. The newspaper denied the validity of American suspicion that the British government directly controls all commercial policy in the Middle East and seeks to hold Middle East oil in the ground for strategic purposes while U. S. and other Western Hemisphere reserves are drawn upon heavily.

Congressmen Think RFC Too Hasty About Closing Down Big Inch Lines

Announcement by the Reconstruction Finance Corporation that it planned to put the government-owned pipe lines out of service brought repercussions in Congress last week and demands that they be kept in operation until the question of their final disposition is settled.

The possibility that the two Big-Inch lines would be sold "for ten cents on the dollar" and converted to natural gas transmission was immediately raised by Senator W. Lee O'Daniel of Texas, while Representative Jerry Voorhis of California declared that the "key to the monopolistic power of the major companies lies in their control of pipe lines" and that they therefore fear the existence of true common carrier lines.

Voorhis pointed out in the House that the surplus property act provides that no pipe lines and facilities used for transporting oil which cost the government in excess of $5 million should be disposed of unless and until a report concerning the facilities had been submitted to Congress for its examination, although the Surplus Property Board may lease any such property for a term of not more than five years.

Gives His Reasons

"In the first place," he asked, "has consideration been given to the fact that under the surplus property act these pipe lines cannot be disposed of except by five-year lease until the report has been made to Congress?

"In the second place, can the action of draining and sealing these lines be justified in view of the fact that it will require in all probability approximately $14 million of new investment for anyone purchasing the lines to refill them before such an agency would be in a position to realize anything on its investment?

"In the third place, what about the public's interest in these lines, the desirability that the Cole Act be amended so as to make it possible for these great pipe lines to become true common carriers for the benefit of the small and independent producers on the one hand and the consumers on the other?"

Voorhis charged that more than a year ago the PIWC considered ways and means of abandoning the Big-Inch line.

"Only One Possible Buyer"

Only one of the very biggest oil companies, or a combination of large companies, is in position to buy the Big-Inch lines, he asserted, questioning whether the RFC had any idea whether it really will receive any bids for them.

"At the very least,' he said, "it seems to me that this haste in abandoning these pipe lines and putting them up for sale is a questionable policy, particularly when we know that this is precisely the kind of action which those interests which most bitterly oppose any kind of true common carrier for petroleum products would like to see taken.

Senator Joseph C. O'Mahoney of Wyoming, chairman of the Senate's special Petroleum Investigating Committee, also expressed the opinion that the RFC had acted with undue haste. Asserting that the pipe lines operated at a profit of $135 million during the war, he took the position they should be continued in operation until Congress "has had a chance to explore the situation."

The Senator pointed out that his committee will hold hearings soon on the postwar possibilities of the pipe lines. Meanwhile, he said, he will discuss the matter with W. Stuart Symington, chairman of the Surplus Property Board, who has just returned from Europe.

RFC's Order

RFC's announcement which started congressmen talking was that five of the six government-owned lines built during the war would be discontinued within the next 30 to 60 days. Lines to be discontinued include the Big-Inch, Little Big-Inch, Florida emergency from Clarabelle to Jacksonville, Greensboro-Richmond extension of the Plantation Line, and the Southwest emergency from Corpus Christi to Houston, Texas.

The remaining line, the Ohio emergency from Fostoria to Akron, is being operated under a lease agreement by a Private company.

The RFC said purchases of western and southwestern Texas crudes have already been halted, and that as soon as the crude and products in the two Big-Inch feeder lines and various storage tanks, together with purchases during September, are moved through, the remaining crude and products will be delivered by pumping water through the lines, later replacing the water with properly treated inhibitors to preserve them.

During the operation of the five lines, it is estimated they handled about 483 million barrels, 327 million of crude and 156 million of products. Shipments through the two Big-Inch lines totaled 367,675,000 barrels to August 31, consisting of 260,750,000 barrels of crude through the Big-Inch and 107,125,000 barrels of products through the little Big-Inch.

RFC reported the investment in the Big-Inch line was $78,535,000 and in the Little Big-Inch $67,300,000. The total cost of the Big-Inch line for operation, maintenance and administration of the crude system as of June 30, last, was about $16,483,000; similar figure for the Little Big-Inch was $10,826,000.

The recent average cost per barrel, exclusive of depreciation, interest and taxes, of shipping crude and products was reported as follows:

Big-Inch: Operating cost 6.851 cents; gathering and transportation, 21.960 cents; total, 28.811 cents.

Little Big-Inch: Operating cost, 11.105 cents; gathering and transportation, 0.133 cents; total 11.238 cents.

The investment in the Florida line was $4,210,000 and it moved 19,400,000 barrels at a total operating cost of 8.08 cents; the Greensboro-Richmond extension cost $3,400,000, and it moved 21,900,000 barrels at a cost of 4.8 cents; the Southwest line cost $6,130,000 and it moved 50,775,000 barrels at a cost of 2.34 cents.

Basis of Rates

Using War Shipping Administration rates, the average prewar cost of moving oil from the well and by tanker to points north of Cape Hatteras was 60 cents per barrel. In selling crude and products, RFC added 80 cents a barrel to the posted field price of crude and 65 cents to the refinery price of products, but since transportation costs on substantially all crude and products were equalized the amount of the increment added was immaterial.

The RFC is inviting negotiations for purchase or lease of the five lines.

Southern Natural Line Is Authorized by Commission

FPC last week authorized Southern Natural Gas Company to build about 116 miles of 22- to 6⅝-inch pipe line in Louisiana, Georgia, Alabama and Mississippi, a 1200-horsepower compression station on the Montgomery-Columbus branch line near Wetumpka, Alabama, and other facilities required to insure adequate deliveries of gas to existing customers.

The new facilities, estimated to cost $3,771,760, will increase the company's delivery capacity from 220 million to 245 million cubic feet daily.

FPC also ordered a hearing September 24 on proposed new rate schedules of the Panhandle Eastern Pipe Line Company which are being resisted by the City of Detroit and County of Wayne, Michigan.

The commission has ordered extension of natural gas service to southeastern Wisconsin, directing the Natural Gas Pipeline Company of America to extend its facilities to establish a connection with the Wisconsin Southern Gas Company at the Illinois-Wisconsin state line near Genoa City, Wisconsin, and authorizing the Wisconsin Southern to construct 50,000 feet of 4½-inch transmission line from the connection to Lake Geneva, Wisconsin.

Small Refiner Preference

Legislation which would give small refiners preference in the disposition by the government of its royalty oil, introduced in Congress last spring by Senator Joseph C. O'Mahoney of Wyoming, was favorably reported by the Senate Public Lands Committee last week.

The measure is designed to insure small refiners access to the royalty oil, which it is complained they do not have at present.

Tentative Program Listed For Drilling Contractors

Governor Robert S. Kerr of Oklahoma will be toastmaster at the informal banquet to be held during the fifth annual meeting of the American Association of Oil Well Drilling Contractors, scheduled October 1-2, Skirvin Hotel, Oklahoma City. One of the principal talks will be by P. H. Bohart, director of production, PAW, Washington, on "The Petroleum Outlook."

The tentative program as announced by Secretary Brad Mills of Dallas is as follows:

Monday Morning, October 1

8:30-10:00—Registration.
10:00—Meeting of committees (open to all)
1. Manpower, labor relations, etc.
2. Safety and insurance
3. Accounting
4. Rotary drilling—materials, practices
5. Cable tool drilling

Monday Afternoon

Business Meeting, Waldo Stephens, Oklahoma City, presiding.
2:00—Address of welcome.
President's address—Howard P. Holmes, Two States Drilling Company, Dallas.
Committee reports and open session.
Report of nominating committee and election of directors.
4:30—Directors' meeting.

Monday Evening

6:30—Fellowship hour
7:30—Banquet (informal). Toastmaster: Governor Robert S. Kerr, Oklahoma City. Guest speaker: To be announced.

Tuesday Morning, October 2

10:00—General session, Ralph W. Marshall, Los Angeles, presiding.
"Drilling Equipment Needs," Douglas Ragland, Humble Oil & Refining Company, Houston.
Drilling practices.
Association's accounting program, Leland Breckenridge, AAODC, Dallas.
"Safety in Drilling," W. F. Burris and C. C. Weiss, Phillips Petroleum Company, Bartlesville.

Tuesday Noon

Luncheon.
Installation of officers.

Tuesday Afternoon

2:00—General session, C. W. Alcorn, Houston, presiding.
"The Petroleum Outlook," P. H. Bohart, director of production, Petroleum Administration for War, Washington.
"Adaptation of Contract Drilling to Peacetime Operations," Glenn A. Campbell, Glenn Drilling Company, Tulsa.
Equipment delivery prospects, Fred M. Mayer, Continental Supply Company, Dallas.
6:30—Barbecue.

The OIL WEEKLY October 1 will feature a number of articles of special interest to oil well drilling contractors, their publication next week being timed to coincide with the fifth annual convention of the American Association scheduled October 1-2 in Oklahoma City.

Mississippi's Gas Policy Made Clear in Statement

A policy regarding natural gas for the state has been set forth in a report of the executive committee of the advisory committee to the Mississippi Oil and Gas Board. The principles enunciated in the report have been approved by Governor Thomas L. Bailey and will be presented at one of the Federal Power Commission hearings.

"Mississippi believes it to be a sound public policy to insist that the separation of governmental powers between state and nation under the traditional system of American constitutional government be scrupulously preserved in respect to the conservation of oil and gas and the regulation of the oil and gas business," the statement declares.

Principles and objectives outlined in the new policy include:

The oil and gas business should remain in the hands of private industry, using its own capital.

Problems of conservation and waste are primarily industry problems and regulations for such are matters of exclusive state jurisdiction.

While production of oil and gas should be conducted by competitive effort, it is subject to reasonable regulation by the state to assure prevention of physical waste, ratable takings, adequate enforcement of proper gas-oil ratios, rapid development of procedures of gas cycling and repressuring where warranted, and that gas produced with oil and reasonably accessible will have proper market.

The search for oil and gas is best promoted by competitive effort in an assured atmosphere of freedom of individual action and of incentive.

Producers should hasten development of cycling and repressuring projects wherever warranted.

Through cooperation with state regulatory agencies, all vent gas economically available for purchase should be marketed.

The end use of natural gas should not be regulated, because competition is the best arbiter.

FPC should be clearly limited to interstate transportation and sale of gas.

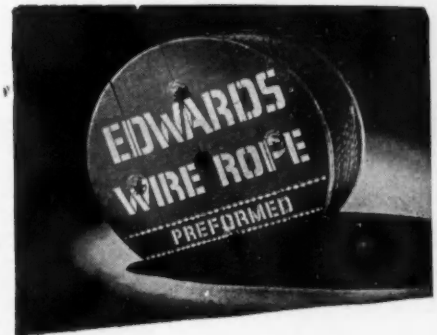
Mineral Leases Offered On Tracts in Louisiana

Bids will be received until October 13 by the Louisiana state mineral board for mineral leases on 13 tracts of state land totaling approximately 4400 acres.

Tracts advertised included 2 totaling 350 acres in Lake Cannisnia in Caddo Parish, 2 totaling about 2100 acres of Mississippi River lands in Madison and East Carroll parishes, 113 acres in Bayou Teche in St. Martin Parish, 120 acres in Bayou D'Arbonne and other water bottoms in Lincoln Parish, 750 acres in the Bayou Dupont area of Plaquemines and Jefferson parishes, 700 acres in Plaquemines Parish, 160 acres in Caldwell Parish, and 658 acres in the six-mile Lake Willow Cove area of St. Martin Parish.

Texas Field Named

Tom Graham's Cole Petroleum Company 1, M. Arispi survey, Webb County, Texas, has been designated as the discovery well of the "Staggs" field, Don O. Chapell, chairman of the oil field nomenclature committee of the South Texas Geological Society, has announced.



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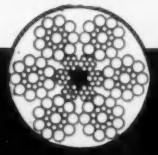

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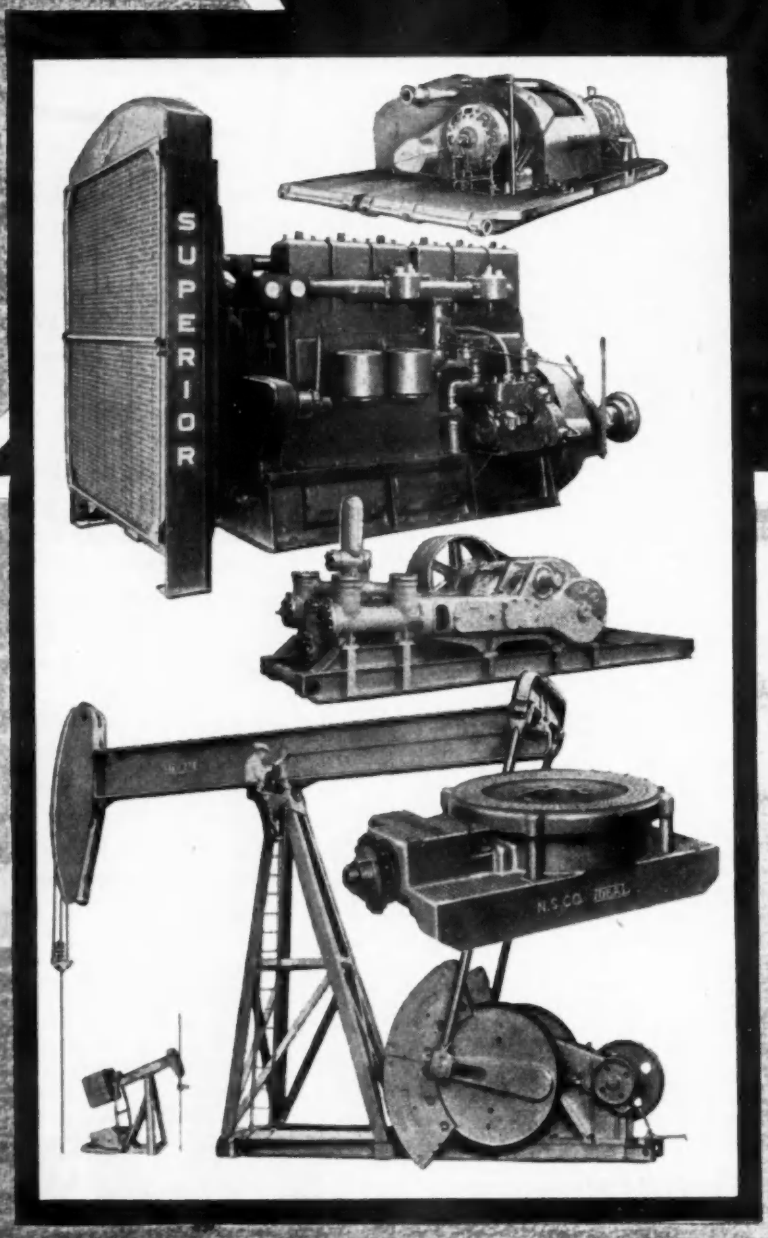

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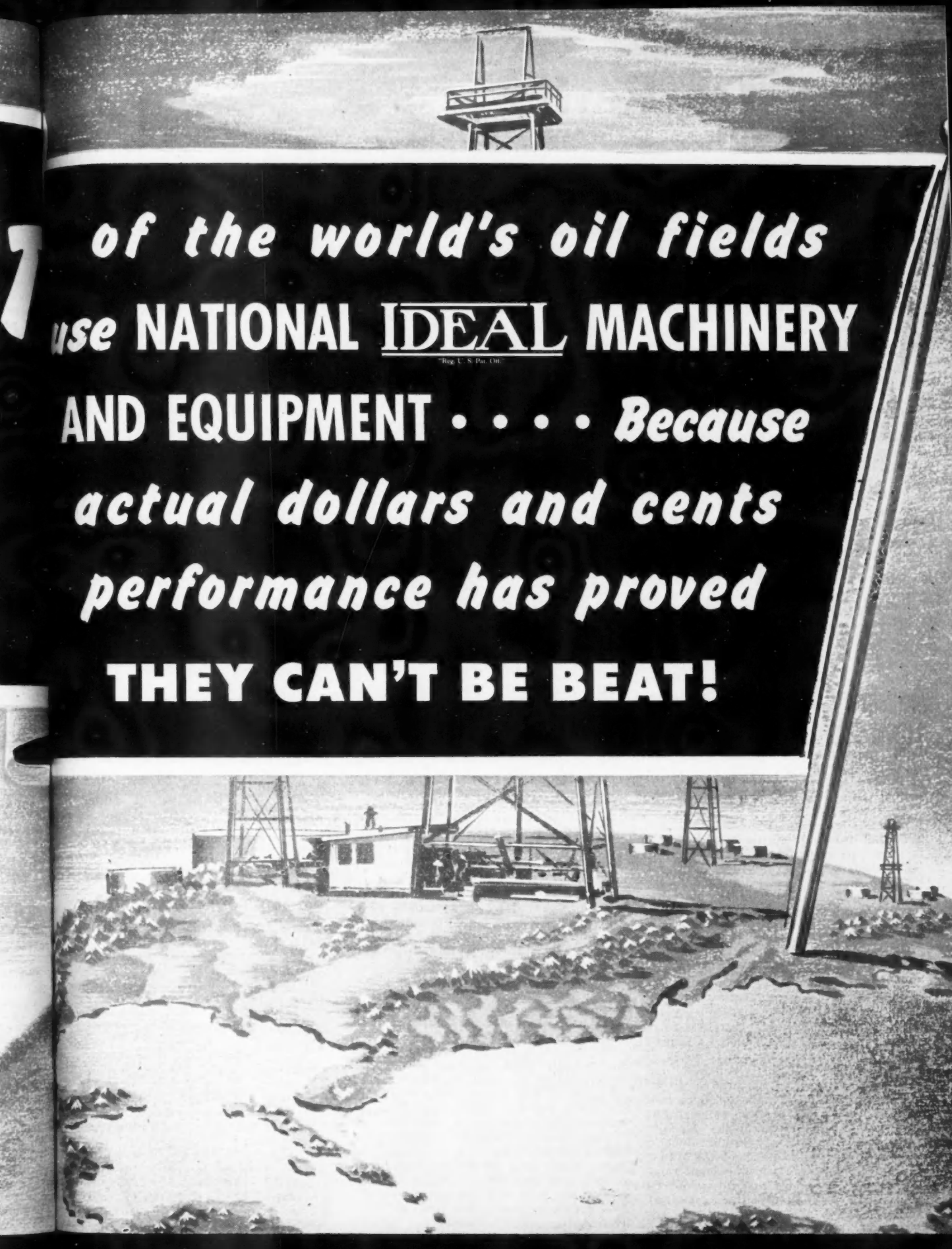

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Tax Review

A Regular Feature of THE OIL WEEKLY

By WILLIAM O. TAYLOR*

This column is designed to review legislation, judicial decisions, administrative rulings and policies, and topics which are of current interest to the oil industry, from a tax viewpoint. It will be published as frequently as new developments seem to require.

Supreme Court Will Determine Status of Share in Net Profits Retained by Lessor.

THE Supreme Court of the United States has agreed to review the decision of the Fifth Circuit Court in *Commissioner v. Kirby Petroleum Comany, 148 F. (2d) 80.* A petition for review of the Ninth Circuit Court's decision in *Commissioner v. Crawford, 148 F. (2d) 776,* has not as yet been granted or denied by the court. Both cases, in which the two circuit courts reached opposite results, involved the question of whether a lessor, who retains a royalty equal to a fractional part of production from the lease and also a share in profits from operation of the lease, is entitled to a depletion deduction against his share of the net profits. The Fifth Circuit denied the deduction; the Ninth Circuit allowed it.

The Government relied on *Helvering v. O'Donnell, 303 U. S. 370,* and *Helvering v. Elbe Oil Land Development Company, 303 U. S. 372,* in each of which the Supreme Court had disallowed a depletion deduction against net profit payments from operation of oil leases. The Fifth Circuit, with Judge Hutcheson dissenting, thought those cases controlling and held, in effect, that the tax payer had made an outright sale of oil in place except for that retained by it under the ordinary royalty provisions in the lease, that it had no "economic interest" in production except as to royalty oil, and was therefore not entitled to depletion on the share of profits which it received. The Ninth Circuit, on the other hand, distinguished the cases on which the government relied by pointing out that the tax payers there expressly sold all their rights in the oil properties involved, from which it followed that their subsequent receipt of a share of net profits from the properties constituted proceeds of the sale of the properties and not depletable income from operation of them.

The writer is of the opinion that the Ninth Circuit and Judge Hutcheson are correct and that the Fifth Circuit's opinion in the *Kirby case* will be reversed by the Supreme Court. Whether one who transfers part of his interest in an oil property has nevertheless retained an "economic interest" therein, so as to entitle him to depletion on his receipts from the transaction, should depend upon the legal relationship of the transferor and transferee and the legal relationship of each to the oil property involved, rather than upon the immaterial fact of whether the transferor is to receive his deferred benefits from the transaction in the form of a stipulated percentage of gross production or a stipulated percentage of net profits. There is nothing magic (or certainly there ought not to be) in the fact that royalties are customarily computed on gross production. If a transaction is in all respects a lease except that the lessor is to receive ¼ of the net profits rather than ⅛ of gross production, there is no logical and no very good legal reason for treating it taxwise any differently than any other lease. The controlling consideration should be that the transaction is a lease rather than a sale; or that it more nearly resembles a lease than a sale.

The question involved in the *Kirby* and *Crawford* cases is not limited to land owners. Whatever the final answer by the Supreme Court, it will apply equally to a lessee who assigns his lease for a share in profits as well as a fractional part of gross production. If the proposition of the Ninth Circuit is sustained, then the operator of a lease in which the lessor has retained a share of profits will not have to report as income the amount paid by him to the lessor.

* * *

No Loss Allowable on Abandonment of Well Under Certain Circumstances.

IN *Mohawk Petroleum Company v. Commissioner, 148 F. (2d) 957,* the taxpayer abandoned certain wells which had been producers, but continued to produce other wells on the leases on which the abandoned wells were located. A loss equal to the cost of the well less prior years' depreciation was claimed as a deduction in the year of abandonment. The deduction was not allowed, because it was said that to do so would be inconsistent with the taxpayer's method of computing depreciation. Mohawk, like many oil producers, computed depreciation by the so-called "unit-of-production" method. Using each lease as a depreciable unit, an estimate was made of total recoverable oil from the lease. This figure was divided into the total cost of the equipment in all wells on the lease in order to get a per-barrel unit of equipment cost. This unit, in turn, when multiplied by the number of barrels produced from the lease in any year, gave the amount of depreciation on well equipment on that lease for the year.

The court said such a method of computing depreciation contemplates that some wells will be abandoned before others and that the aggregate of well equipment cost will be spread ratably over the entire production from the lease. Hence, the taxpayer could not claim a loss due to the happening of an event which was presumably taken care of by the depreciation method which it had adopted.

The court's reasoning would not necessarily apply to a taxpayer who computes depreciation on a straight-line basis, i.e., by using an estimated useful life in years of its equipment without regard to oil reserves, or to one who maintains cost, oil reserve, and production records by individual wells rather than by leases. Neither should it apply where a well rather suddenly ceases to produce without having produced the amount of oil reasonably attributable to it in prior years' reserve estimates for the lease. In the latter case, the sudden abandonment of the well could not be said to have been contemplated by the depreciation method employed in prior years. This would be particularly true if the abandonment were due to casing failure or some defect in the well itself other than exhaustion of the oil reserve.

* * *

Supreme Court Will Not Review Clarion Oil Company Case; Attention Called to Error in Article in August 13 Issue.

THE Supreme Court of the United States has denied a petition to review the decision of the United States Circuit Court of Appeals, District of Columbia, in *Commissioner v. Clarion Oil Company, 148 F. (2d) 671.* That case held that a cash payment received for the assignment of an oil and gas lease, where the assignor retained an over-ride, constituted a "royalty" for purposes of the personal holding company statute. The question of the applicability of the personal holding company statute to taxpayers engaged in oil production was discussed in THE OIL WEEKLY, August 13, 1945.

In that article, which appeared on page 72, the next to last sentence in the fourth paragraph should have read as follows: "Mineral, oil or gas royalties are not classed as personal holding company income if they constitute 50 percent or more of the corporation's gross income **and** if the expenses of the corporation which are deductible under Sec. 23 (a) of the Code (excluding salaries paid to shareholders) amount to 15 percent or more of its gross income."

☆

23 Automotive Engineers Are Chosen for SAE Board

Appointments of an SAE technical board of 23 high-ranking automotive engineers to coordinate and supervise all technical committee activities of the Society of Automotive Engineers has been announced by J. M. Crawford, SAE president.

L. R. Buckendale, engineering vice president of the Timken-Detroit Axle Company, Detroit, has been named chairman of the board, which is converting the SAE war engineering program to peacetime service of industry and of government.

Additionally, the board will direct the development of a new cooperative engineering program designed to meet the request of Lt. Gen. Levin H. Campbell, U. S. Army Chief of Ordnance, for broadening and intensifying the wartime "Functional teamwork" of SAE and ordnance engineers to keep American motorized military equipment superior to that of potential enemies.

* The author is a member of the firm of Butler, Binion, Rice & Cook.

Industry's Operations Adjusted to Lower Demand Caused by War's End

Oil industry operations were fairly well adjusted to the changed conditions brought by war's end, statistics of the American Petroleum Institute for the week ended September 15 indicated.

The nation's production of crude, following sharp decreases of earlier weeks, increased nominally, but there was a further moderate reduction of refinery runs. Production of gasoline was increased a little, and there was only a nominal change in stocks, which declined slightly. Needed light fuel oil was increased in output at refineries, and stocks were increased materially, as they should be at this time of the year. Although residual fuel oil production was further reduced there was some further building up of the stocks of that product.

U. S. crude production averaged 4,538,000 barrels daily in the week of September 15, an increase of 20,000 over the week before, although 207,000 a day or 4.4 percent less than the output of 4,745,000 daily reported for the comparable week last year.

Crude runs to stills averaged 4,616,000 barrels daily, down 24,000 from the previous week and 18,000 a day less than runs in the corresponding week last year. Stocks of crude totaled 213,721,000 barrels on September 8, the Bureau of Mines reported. They had been lowered 1,448,000 barrels during the week. The new total was about 7 million barrels or 3 percent less than the 220,623,000 barrels held a year previously.

Gasoline production of 14,871,000 barrels in the September 15 week was 18,000 more than in the previous week and 397,000 barrels or 2.7 percent more than in the comparable week a year ago. Stocks of finished and unfinished gasoline were lowered 21,000 barrels during the week to 85,209,000 barrels, an amount 7,840,000 barrels or 10.1 percent above the 77,369,000 held a year before. Stocks of civilian grade were increased 993,000 barrels, or from 49,112,000 to 50,105,000 barrels, and the latter amount compared with 40,213,000 barrels held a year previously. Military and other grades in storage were reduced 1,014,000 barrels, or from 36,118,000 to 35,104,000 barrels, and the latter amount compared with 37,156,000 barrels held a year previously.

Production of gasoil and distillate fuel totaled 4,855,000 barrels in the week of September 15, an increase of 377,000 over the week before and 505,000 barrels or 11.6 percent more than output in the like week last year. Stocks were increased by 1,318,000 barrels, having risen to 43,507,000 barrels, and that amount was 1,425,000 barrels or 3.4 percent more than the 42,082,000 barrels held on September 16 last year.

Residual fuel oil production of 8,188,000 barrels was 52,000 less than in the previous week and 47,000 barrels less than in the like week a year ago. Stocks were increased by 599,000 barrels to 48,470,000, and the latter amount was nearly 14,000,000 barrels or about 22 percent less than the 62,243,000 barrels held September 16 last year.

Tax Suits Filed

The Texas Attorney General has filed suit against the Phillips Petroleum Company for taxes, penalties, and interest amounting to $1,010,723, plus additional interest on one amount.

The state asks for a lien on all of the company's properties used in producing gas, as security for payment of the claimed amounts.

Trends of Operations and Changes in Stocks

Figures on crude stocks are from Bureau of Mines weekly reports; all others from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines basis.

(All figures in thousands of barrels—add 000)

HIGHS AND LOWS OF RECENT YEARS

ITEM	Crude Oil Prod. Barrels Daily	Crude Oil Prod. Week Ended	Runs to Stills Barrels Daily	Runs to Stills Week Ended	Crude Stocks Barrels	Crude Stocks Week Ended	Gasoline Stocks Barrels	Gasoline Stocks Week Ended	Gasoil and Distillate Stocks Barrels	Gasoil and Distillate Stocks Week Ended	Residual Fuel Oil Stocks Barrels	Residual Fuel Oil Stocks Week Ended
Highs:												
1941	4,337	11-22	4,120	10-18	266,187	3-29	99,727	3-29	[1]54,988	11-15	102,448	1- 4
1942	4,337	2- 7	3,961	1- 3	263,208	3-28	[1]109,281	3-14	47,861	11-14	95,857	1- 8
1943	4,436	11-13	4,331	12- 4	245,752	5-29	94,159	3-20	47,187	11-27	72,881	1- 2
1944	4,762	9-30	4,798	12-30	240,992	1- 1	89,162	4- 1	48,868	10-28	64,744	10- 7
1945	[1]4,944	7-14	[1]5,140	8-18	224,079	6- 2	99,012	3-24	43,507	9-15	56,074	1- 6
Lows:												
1939	[2]1,601	8-26	3,125	2-18	[2]229,127	10-12	71,152	10- 7	20,722	4-15	105,397	4- 3
1941	3,364	1-11	3,490	1-18	240,399	11-15	79,928	10- 4	28,382	4-12	90,914	7-13
1942	3,297	7- 4	3,393	5-23	231,896	12-12	75,934	12- 5	29,240	4-25	72,962	12-26
1943	3,821	1- 9	3,579	3-18	232,191	1- 9	68,182	10-16	30,732	4- 3	57,596	12-25
1944	4,357	1- 1	4,228	2-12	220,258	9- 9	76,302	1- 1	30,232	4-19	49,737	8-18
1945	4,518	9- 8	4,616	9-15	211,813	8-25	84,218	9- 1	26,488	3-17	38,548	5-26

TRENDS OF 1944 AND 1945

Trends in Week Ended:	Crude Oil Production Daily	Crude Oil Runs to Stills Daily	Crude Oil Stocks Week End	Gasoline Production Weekly	Gasoline Stocks Week End	Gasoil and Distillate Production Weekly	Gasoil and Distillate Stocks Weekly	Residual Fuel Production Weekly	Residual Fuel Stocks Week End
1944:									
January 1	4,357	4,453	240,992	13,192	76,302	4,575	42,310	9,141	57,380
January 29	4,400	4,359	240,251	13,427	81,075	4,064	37,266	8,889	52,857
February 26	4,423	4,377	237,137	13,183	85,248	4,558	33,766	8,952	51,387
March 25	4,385	4,443	236,285	13,362	87,287	4,979	31,319	9,018	51,669
April 1	4,383	4,435	234,667	13,824	89,162	4,450	30,530	8,867	51,326
April 29	4,431	4,300	235,342	13,126	88,342	4,284	30,236	8,398	49,985
May 27	4,514	4,532	234,423	13,502	86,468	4,702	32,035	8,568	49,812
July 1	4,587	4,648	228,860	14,052	83,559	4,496	35,360	8,872	52,285
July 29	4,608	4,627	225,112	14,115	82,605	4,833	38,135	8,900	56,230
August 26	4,667	4,698	222,931	14,112	80,740	4,566	41,453	8,680	59,389
September 30	4,762	4,775	222,393	14,494	78,028	4,622	45,239	9,292	64,226
October 28	4,740	4,658	223,235	14,117	79,058	4,772	48,705	8,985	64,382
December 2	4,712	4,693	221,591	14,858	80,427	4,082	45,832	8,981	61,737
December 9	4,704	4,552	220,258	14,611	80,880	4,056	44,430	8,922	60,458
December 16	4,695	4,587	222,075	14,145	82,747	4,353	42,413	8,727	59,280
December 23	4,729	4,682	222,575	14,635	83,355	4,605	40,846	8,798	58,509
December 30	4,705	4,798	222,998	15,342	86,614	4,257	39,495	9,156	57,430
1945:									
January 27	4,727	4,756	221,310	14,957	88,223	4,843	33,651	9,252	51,119
February 24	4,777	4,803	219,351	15,500	95,972	4,958	28,753	9,084	46,713
March 31	4,781	4,677	223,782	14,644	98,758	4,548	26,889	9,184	41,745
April 28	4,805	4,780	223,474	14,633	94,068	4,636	28,273	9,379	39,813
May 26	4,887	4,950	222,831	15,194	89,121	4,667	29,184	9,670	38,548
June 2	4,859	4,804	224,079	15,317	88,696	4,857	29,819	9,487	39,022
June 9	4,853	4,827	221,552	15,256	87,896	4,842	30,339	9,352	38,996
June 16	4,888	4,915	221,932	15,132	87,504	5,342	30,397	9,252	39,482
June 23	4,898	5,002	220,974	15,367	87,462	5,014	31,761	9,558	39,893
June 30	4,903	4,999	220,781	15,546	86,472	4,910	32,213	9,077	40,488
July 7	4,886	5,006	217,250	15,082	86,329	4,875	33,667	9,238	40,754
July 14	[1]4,944	4,945	216,355	15,349	85,401	5,197	34,804	9,337	41,489
July 21	4,944	4,927	218,108	15,430	85,930	5,090	35,458	9,071	42,480
July 28	4,930	4,996	218,507	16,106	86,008	4,598	36,071	9,586	42,283
August 4	4,922	5,077	215,382	16,053	84,812	4,758	36,721	9,451	42,842
August 11	4,934	5,072	214,098	15,547	86,307	5,082	36,977	[1]9,484	42,927
August 18	4,934	[1]5,140	211,910	15,890	85,985	[1]5,344	38,675	9,934	44,845
August 25	4,892	4,931	[4]211,813	15,986	84,693	4,960	39,782	9,356	46,201
September 1	4,876	4,685	215,169	14,904	84,218	5,030	40,859	8,528	46,807
September 8	4,518	4,640	213,721	14,853	85,230	4,478	42,189	8,240	47,871
Sept. 15, 1945	4,538	4,616	.....	14,871	85,209	4,855	43,507	8,188	48,470
Sept. 16, 1944	4,745	4,634	220,623	14,474	77,369	4,350	42,082	8,235	62,243
Change:									
In week	+20	−24	−1,448	+18	−21	+377	+1,318	−52	+599
In year	−207	−18	−6,902	+397	+7,840	+505	+1,425	−47	−13,773
In year	−4.4%	−0.4%	−3.1%	+2.7%	+10.1%	+11.6%	+3.4%	−0.6%	−22.1%

[1] All time peak. [2] Lowest between January, 1922 and July 1, 1944. [3] Lowest since October, 1922, due to shutdown of six Mid-Continent states. [4] Lowest since December, 1921. [5] Stocks, September 9, 1944.

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Army Pipe Line Reclaimed Completely in 2½ Months

Complete reclamation of the once-famed major army system in 2½ months, regarded as quite a feat, is reported by Lieutenant Colonel Rex L. Smith, commanding officer of the military pipe line service, who was returned to Eldorado, Kansas, and has resumed his former connection with the Skelly Oil Company. The system comprised three 6-inch lines from Cherbourg nearly across France and one 6-inch on past the Rhine.

This system with its 1500 miles of pipe was started in June, 1944, and pumped its last bit of gasoline one year later almost to the day. In one month after its shutdown, enough pipe and equipment was reclaimed to make up a big parcel for other theaters, Colonel Smith said.

Michigan Group to Oppose Gas Exports to Canada

Michigan Public Service Commission will oppose Panhandle Eastern Pipe Line Company's proposal to sell 5½ billion cubic feet of gas annually to Canadian markets, William J. McBreaty, commission chairman, said.

McBreaty said Michigan utilities were able to purchase only 37 billion cubic feet of gas from Panhandle in 1944, "while they would have purchased 100 billion cubic feet if facilities had been available."

The chairman hinted that the commission would give its support to Michigan Consolidated Gas Company's proposal to build its own pipe line from the Texas Panhandle fields to Michigan.

McBreaty also revealed that he has called a "closed meeting" of natural gas interests in Michigan for September 28 to discuss ways and means of better serving the Michigan market.

FPC Permit Asked to Export Gas From Texas to Mexico

Federal Power Commission permission to export a maximum of 20 million cubic feet of natural gas daily from Texas to Mexico is being sought by Sam L. Miller of McAllen, Texas.

Miller proposes to transport the gas from wells in Starr and Hidalgo counties for sale and delivery at a point on the international boundary to the Cia. Petroleos Mexicanos. The Mexican agency will transport the gas to Monterrey for sale and distribution in and near that city for domestic and industrial use.

FPC has postponed from October 3 to December 12 a hearing of Reynosa Pipe Line Company of Corpus Christi for authority to export up to 60 million cubic feet of gas a day from Texas to Mexico.

Originally the Reynosa plea was denied by a 3-to-2 decision on the ground that adequate evidence had not been submitted of the possibilities of obtaining supplies in Mexico. Rehearing was asked by the company, which said it had new and additional evidence to present.

The commission has canceled a hearing scheduled for September 25 on the schedule of the Cabot Gas Corporation to increase rates to the Pavilion Natural Gas Company, the increases having been canceled.

Two-Power Operation of Middle East Lines Seen

Joint British and American operation of pipe line facilities in the Middle East was seen by Administrator Ickes in London last week as negotiations on the revised Anglo-American petroleum agreement got under way.

Distribution problems in the Middle East call for immediate solution, Ickes said, disclosing that at a later date he hopes to interest the Soviet Union in international oil collaboration.

During the war, he pointed out, the Middle East provided only about 700,000 barrels of oil daily, in contrast with the 5 million barrels provided by the United States. Middle East reserves are estimated at around 20 billion barrels, about the same as the United States, and may become a major source of world supply within the next few years.

Work On Mexican Refinery Is Officially Under Way

A petroleum construction project by Petroleos Mexicanos, government-operated oil company of Mexico, has been started officially at Salamanca, state of Guanajuato, east of Guadalajara and northwest of Mexico City. Commencement of actual work on the project was inaugurated last week in a ceremony in which President Manuel Avila Camacho laid the cornerstone for the refinery. Efrain Buenrostro, general manager of "Pemex," said the project is part of Mexico's "ten-year" plan for developing the country's industry.

The Salamanca refinery, described as a $4 million project, will be a topping plant, with initial capacity of several thousand barrels of crude per day. It is understood that part of the equipment will be surplus held by Pemex in the various refineries of the Tampico district.

The Salamanca plant will be supplied with crude by pipe line which will be constructed from Poza Rica field at a cost of $6 million. The plans call for laying of new pipe alongside the existing Poza Rica-Mexico City line through and up the mountains to the plateau, about half the length of that existing line, and then forking off to Salamanca. The existing pump stations on the Poza Rica-Mexico City pipe line are being equipped with new centrifugal pumps that will provide higher pressures and capacity in supplying Mexico City. That will leave the existing pumps for handling the throughput of the proposed new line to Salamanca. The present pumps on the Poza Rica-Mexico City pipe line afford a capacity of 25,000 barrels daily, and they will provide similar capacity in supplying Salamanca.

Dutch East Indies Oil Within Next Six Months

Restoration of oil wells in the Dutch East Indies is expected within 3 to 6 months, J. W. B. Everts, an official of the Royal Packet Navigation Company (known as KPM), has declared. However, Everts said that should it require longer to revive the production the islands would be forced to import fuel.

Plans for revival of shipping in the Dutch East Indies are well underway with necessary shipping space expected to be ready when the wells are back on production.

1944 Middle East Oil Output Put at 155 Million Barrels

Middle East oil production during 1944 was 155 million barrels, according to London reports, an increase of 30 million since 1939. This is the first year Middle East production has exceeded the highest peak reached during prewar years and is attributed to expansion of the refining facilities and improvement in the tanker situation.

Continued expansion of the refining capacity, especially at Abadan and Bahrein, and the tapping of rich oil sources in Saudi Arabia, likely will push the Middle East crude oil output beyond 200 million barrels during 1945.

With additional refinery capacity at Bahrein, the output of the Saudi Arabian fields is expected to reach 40 or 50 million barrels during the next 12 months as compared with 10 million barrels in 1944.

Other developments in the Middle East oil situation include the prospect of early shipments of oil and products from Kuwait. The Kuwait concession is controlled jointly by British Anglo-Iranian Oil Company and the American Gulf Oil Corporation.

New Depth Drilling Mark Established in Russia

A new deep drilling record is being established in Russia. Reports from the Soviet Union say a test in one of the Baku Trust Ordzhonikidze oil fields was drilling below 11,700 feet, deepest ever drilled in Russia. Projected depth is 15,625 feet.

The report said Russian "Turbo-Bur" drilling equipment was being used for the first time in this test.

Equipment Needed to Hike Oil Production In Africa

Increased production could be obtained in the three fields in Morocco and two in Algeria if the French had drilling equipment, E. D. Lynton, geologist for California Research Corporation, told the Pacific section AAPG. Lynton served as chief of the procurement and development division of the North African Economic Board which sought to rehabilitate industries, mines and oil fields of French North Africa during the American Army occupation period in 1943-44.

"New fields undoubtedly could be discovered if more care were taken in selecting locations," said Lynton, who is convinced that undiscovered oil reserves exist in French North Africa because extensive areas are underlain by suitable formations and numerous oil seeps issue from these formations.

"On the whole these areas have been ignored by the French and wells drilled by other companies have stopped short of adequate tests," he said.

The three fields in Morocco produce about 200 barrels a day and the two in Algeria about 35 barrels a day. There is no production in Tunisia but some wells have been drilled.

Creole's Venezuela Output Remains at High Level

The end of the war has failed to hamper the high rate of operations by Creole Petroleum Corporation in Venezuela. Output during the week ended September 3, including purchased royalty oil, averaged 470,140 barrels daily with that figure being equalled or surpassed in recent months.

Between the week ended July 2, when production, including purchased royalty oil, averaged 420,000 barrels daily, to the week ending August 13 (end of the war) output increased to a high of 506,039 barrels daily.

Russia Begins Study of Arctic Oil Possibilities

Russia has begun a study of oil possibilities of the Komi Republic and other Arctic regions of the Urals.

The study is being made by the Northern Expedition of the Moscow Academy of Science. The expedition has the task of providing information about "this tremendous territory, and its exceptional potentialities closely connected with the Pechora oil deposits," London sources say.

Russia also is working to reestablish international sea-links and construction is under way on pipe lines for oil supplies to major Baltic, Black Sea, Pacific and Arctic harbors.

Colombian Oil Exports

Exports of petroleum from Colombia in 1944 increased 87.4 percent over 1943 to become the second leading export commodity. Petroleum exports, 1944, were valued at 37,317,000 pesos as compared with 20,016,000 pesos in 1943.

Ecuador Production

Production of petroleum in Ecuador in the June quarter of 1945 continued to remain below the 1944 output. The production amounted to 652,183 barrels which was about 13,000 barrels less than in the June quarter of 1944. Gasoline and diesel oil figured prominently among petroleum products.

Petroleum Reservoir Is Suggested by Alaskan Map

Possible existence of a petroleum reservoir in the Wide Bay anticline on the Pacific side of the Alaska Peninsula, about 150 miles west of Kodiak Island, was suggested September 12 by the United States Geological Survey in announcing publication of a map of the area.

"More detailed geologic field work will be necessary before the information available on the surface is complete, but about 60 square miles near the southwest end of the anticline, which covers more than 300 square miles, was mapped and studied in the summer of 1944 by L. G. Kellum, S. N. Daviess and C. M. Swinney, geologists," it was explained.

In the Wide Bay area, the Kialagvik formation, of Middle Jurassic age, consists predominantly of sandstone, siltstone and conglomerate. On the basis of fossils the Kialagvik formation is subdivided into a lower and an upper zone.

The areas studied is covered on the map, copies of which, together with a 17-page report, may be purchased from the U. S. G. S. at 60 cents each.

The Survey also has published a map showing the geology of the Hueco Mountains in El Paso and Hudspeth counties, Texas, showing the results of a study of the geologic history of the exposed rocks which may aid in interpreting the geology of prospective oil-bearing territory in parts of West Texas and southeastern New Mexico.

Titled Preliminary Map 36 of the Oil and Gas Investigations series, copies may be obtained at 75 cents each from the U. S. G. S. offices in Washington, Tulsa or Denver.

English Test Fails

D'Arcy Exploration Company (Anglo-Iranian Oil Group) has abandoned a wildcat at North Creake, seven miles northwest of Fakenham in Norfolk, England.

No shows were encountered and the test was abandoned at 2632 feet in the Pre-Cambrian rocks.

Texas Fields Named

Two recent discoveries in South Texas have been named by the oil field nomenclature committee of the South Texas Geological Society.

Sun Oil Company's M. S. Flores 1 discovery in Porcion 40, Starr County, has been named the Flores field and the name Hysaw has been given the field opened by Seaboard Oil Company's E. N. Hysaw, E. Seguin survey, Karnes County.

Coast Group Formed

Independent Natural Gas Association of California is the name of a new trade organization formed by a representative group of oil and gas men. Officers will be announced later. Headquarters have been opened in the Subway Terminal Building.

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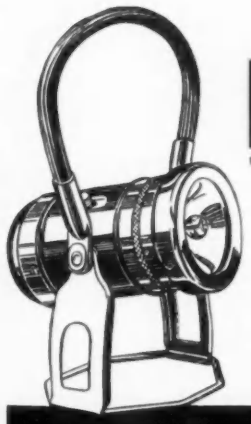

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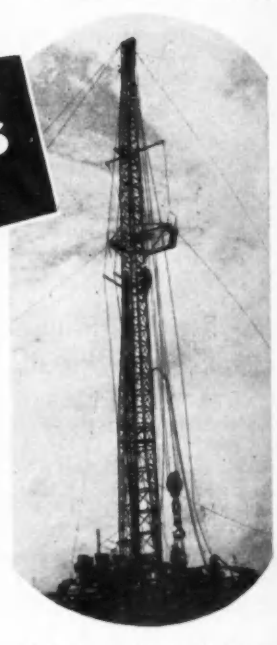

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☆ Oklahoma

Noble County Field East Of Liberty Pool Is Likely

New field looms east of Liberty pool; Simpson sand production found on flank at Dilworth; prospective pool opener noted northeast of Okemah; Arbuckle well in Osage flows 550 barrels; Pure's Panhandle pool opener increases flow.

Noble County: About a mile east of the Liberty pool, Ed J. Kubat appears to have a prospective pool opener at Ramsey 1, NW SW NW 11-22n-2e. Topping Wilcox sand at 4420 feet and drilled to 4437 feet, total depth, the wildcat on drill-stem test recovered 60 feet of oil and about 200 feet of oil-cut mud and operator was preparing for production test.

Kay County: A well flowing 236 barrels in 24 hours establishes Simpson sand production on the northwest flank of the Dilworth pool. The discovery is Dave Morgan Oil Company's Fender 1, C NE NE 36-29n-1w, completed at 3251-3331 feet, total depth. So far the Dilworth pool has produced from Arbuckle lime. The discovery adds greatly to pool reserves.

Okfuskee County: A drill-stem test at Wood Oil Company's Smith 1, SE SW NE 23-12n-10e, about 3½ miles northeast of Okemah, recovered a good enough oil show to warrant production test and operator set 7-inch pipe at 2490 feet. Horizon to be tested is the prolific Booch sand, topped at 2488 feet and drilled to 2518 feet, total depth. While a pool, if opened, may be small, the history of the sand in the general area indicates a fairly good field may result.

Osage County: Wilcox Oil Company's Wister 2, NE SE NW 15-22n-8e, near Hominy, has sparked a decided flurry in the general area after testing 550 barrels of oil in 24 hours from Arbuckle lime. The well is in the Black Dog West pool. It missed the Burgess sand from which 2 wells in the pool are producing and drilled to Arbuckle, topping the lime at 2793 feet and drilling in to 2813 feet, total depth. This is the first Arbuckle lime production in the area and the first well to test that formation.

Cimarron County: The Pure Oil Company's Oklahoma-State 1, SE SE NW 7-5n-8ecm, about 2¾ miles northwest of the Keyes pool and a prospective pool opener, was reported flowing 50 barrels of oil daily while cleaning out. The well first attracted attention early in the month when it reported an oil spray plus 250,000 cubic feet of gas from Cimarron sand at 4786-90 feet. Cleaning continues and tankage is being installed.

West Edmond: Denver Producing & Refining Company completed a trio of good wells in this 4-county oil pool. Sitlington 3, SE NW 10-13n-4w, flowed 215 barrels of oil in 4 hours from 6640-99 feet; Meeker 4, NE SW 10-13n-4w, flowed 220 barrels of oil in 4 hours from 6690-6739 feet; and Johnson 2, NW NE 15-13n-4w, tested 60 barrels of oil the first 25 minutes from 6627-57 feet. All are in the Oklahoma County sector and produce from the Bois D'Arc lime which was not acidized.

Oklahoma County: Fire at Phillips Petroleum Company's Airport 1, NE NE 8-12n-4w, which cost a life and destroyed a rig, was extinguished and derrick has been rebuilt for well reconditioning operations. The well, a heavy gas-distillate producer, caught fire while attempts were in progress to squeeze perforations for a bottom hole water shutoff.

Cleveland County: Sinclair Prairie Oil Company's McDonald 2, NE NW NE 34-10n-3w, was completed in the Burgess sand, flowing 185 barrels of oil the in first 6 hours through casing perforations between 7810-30 and 7840-65 feet. Final test showed the well producing 235 barrels through 12/64-inch tubing choke on a 24-hour gauge, casing pressure 1500 pounds, tubing pressure 700 pounds. The producer is in the South Moore pool, one of the best fields in Oklahoma.

Garvin County: Continental Oil Company's Butterly 1, NW SW SE 14-1n-1e, was bailing at 4190 feet and was to test through additional perforations. It had the Arbuckle at 4422 feet and has been testing at various levels through perforations opposite the Oil Creek sand, producing some oil of low gravity.

Deepest Producing Well In Oklahoma Cost $325,000

Oklahoma's deepest producing well, the Lawson 1, 3 miles north of Lindsay in McClain County, cost $325,000 to drill and complete, again emphasizing the high cost of drilling for the deep sands in the Anadarko Basin of Western Oklahoma. The well is at 10,995 feet, total depth, and produces from the Simpson formation through casing perforations between 10,950 and 10,990 feet.

Cost of drilling and equipping the well which opened the Lindsay North pool, was revealed by Cities Service Oil Company, Mid-Continent Petroleum Corporation and Phillips Oil Company in an application to the Oklahoma Corporation Commission for an 80-acre well spacing pattern for the pool. Exhibit "A" which accompanied the application indicates 43 possible drilling locations in addition to the discovery well.

Wells Completed in United States in Week Ended September 22, 1945

Data preliminary and subject to revision. Revised and more complete data on all completions shown in monthly summary of drilling, published in second issue of each month. More detailed data on wildcats published in third issue of each month.

State or District	FIELD COMPLETIONS: New Wells *Oil	Gas	†Input	Dry	Total	Old Wells Deepened	WILDCAT COMPLETIONS *Oil	Gas	Dry	Total	ALL COMPLETIONS: This Week	Last Week	Cumulative: This Year	Last Year
Alabama	....	....	....	....	....	....	....	....	....	....	....	3	26	27
Arizona	....	....	....	....	....	....	....	....	....	....	....	....	....	6
Arkansas	2	....	....	....	2	....	1	....	....	1	3	3	135	168
California	30	2	....	....	32	....	1	....	....	1	33	37	1,587	1,496
Colorado	....	....	....	....	....	....	....	....	....	....	....	....	21	19
Florida	....	....	....	....	....	....	....	....	....	....	....	....	12	1
Georgia	....	....	....	....	....	....	....	....	....	....	....	....	6	7
Illinois	11	....	1	5	17	8	4	....	8	12	29	39	1,319	1,416
Indiana	2	1	....	1	4	....	1	....	....	1	5	11	254	240
Iowa	....	....	....	....	....	....	....	....	....	....	....	....	1	2
Kansas	17	4	....	7	28	....	1	....	5	6	34	29	1,207	1,267
Kentucky	5	....	....	3	8	....	....	....	3	3	11	21	400	567
Louisiana	13	1	....	3	17	....	....	....	....	....	17	28	740	555
North	3	1	....	....	4	....	....	....	....	....	4	19	284	196
South	10	....	....	3	13	....	....	....	....	....	13	9	456	359
Michigan	5	....	....	2	7	....	....	....	9	9	16	20	557	481
Mississippi	5	....	....	1	6	....	2	....	4	6	12	10	279	140
Missouri	....	....	....	....	....	....	....	....	....	....	....	1	32	32
Montana	....	....	....	....	....	....	....	....	....	....	....	....	156	252
Nebraska	....	....	....	....	....	....	....	....	....	....	....	....	3	12
New Mexico	2	....	....	2	4	....	....	....	2	2	6	7	307	290
New York	15	....	10	....	25	....	....	....	....	....	25	26	816	915
North Carolina	....	....	....	....	....	....	....	....	....	....	....	....	1	....
Ohio	5	4	5	10	24	....	....	....	....	....	24	19	691	708
Oklahoma	25	....	1	16	42	1	2	1	12	15	57	39	1,725	1,321
Pennsylvania	27	11	15	1	54	....	....	....	....	....	54	45	2,113	2,222
Tennessee	....	....	....	....	....	....	....	....	....	....	....	....	2	9
Texas	88	9	....	18	115	1	6	3	27	36	151	122	5,290	4,447
E.Tex.Bor. Co.'s	1	3	....	....	4	....	1	1	2	4	8	1	76	24
E. Texas Field	....	....	....	....	....	....	....	....	....	....	....	....	....	3
Rest of E. Texas	3	....	....	1	4	....	....	....	3	3	7	5	165	208
North Texas	18	....	....	6	24	....	2	....	4	6	30	30	1,269	1,030
W. Central Tex.	3	....	....	1	4	....	1	....	2	3	7	20	350	297
West Texas	33	....	....	....	33	1	....	....	2	2	35	32	1,295	1,157
Tex. Panhandle	1	6	....	1	8	....	....	....	....	....	8	7	436	203
G. Coast, Upper	8	....	....	2	10	....	2	....	3	5	15	15	510	420
G. Coast, Lower	13	....	....	6	19	....	....	1	4	5	24	7	756	697
Southwest Texas	8	....	....	1	9	....	....	1	3	4	13	4	364	330
S. Central Tex.	....	....	....	....	....	....	....	....	4	4	4	1	69	78
Utah	....	....	....	....	....	....	....	....	....	....	....	....	....	1
West Virginia	4	12	....	8	24	....	....	....	....	....	24	15	586	688
Wyoming	....	....	....	....	....	....	....	....	....	....	....	....	112	124
Total U. S.	256	44	32	77	409	10	18	4	70	92	501	475	18,378	17,413

* Includes distillate wells. † Includes salt water disposal wells.

☆ Kansas

Russell County Atherton Pool Is Given Extension

Atherton pool gets southwest extension; pool opener seen north of Canton North field; Phil-Han to test wildcat southeast of Barry field; Lost Springs North pool extended.

Russell County: John Lindas et al's Mills 1, NE SE NE 25-13s-15w, extended the Atherton pool ½ mile southwest after being completed with a physical potential of 140 barrels of oil daily from Arbuckle lime topped at 3310 feet and drilled to 3315 feet, total depth.

McPherson County: Sharon Drilling Company appears to be opening a new field about 1½ miles north and east of the Canton North pool at Crowthers 1, NW SW NW 24-18s-1w. Topping Mississippi lime at 2816 feet and after drilling plug to 2834 feet the wildcat filled with 2600 feet of clean oil. Mississippi lime is level with producers in the Canton North pool as well as with 2 dry holes to the north. Operator will acidize.

Rooks County: A new producing area looms about 2 miles southeast of the Barry pool at Phil-Han Oil Company's McClelland 1, NW NW SW 9-9s-19w. Drilled to 3529 feet in the Arbuckle and with Lansing lime topped at 3222 feet, operator took a drill-stem test at 3348-58 feet and in 20 minutes recovered 540 feet of oil and 50 feet of oil-cut mud. Producing formation may be Simpson sand. Pipe was being set for production test.

Dickinson County: R. E. Youker extended the Lost Springs North pool approximately ½ mile north at Biehler 1, SW NW 27-16s-4e, completed as a pumper making 30 barrels of oil and 15 barrels of water daily from Mississippi lime between 2273-2333 feet, total depth. Slight oil and gas shows were logged at at 2273-2329 feet but were not tested.

Ellis County: Darby & Bothwell, Incorporated's Cromb 1, NE NW NW 22-11s-20w, pool opener 8½ miles north of the Ellis pool, established a physical potential of 190 barrels of oil and about 20 barrels of water per day after acidizing through perforations opposite Lansing lime between 3467-71 feet. On the Lansing this well is 50 feet higher than the same formation in the nearest dry hole.

Nebraska

R. S. Tomer Production Company's Miles 1, NE NE 35-1n-15e, 3 miles southwest of Falls City, Richardson County, was drilling below 1700 feet. The wildcat is 2 miles east and a mile north of the Morrill pool in Brown County, Missouri.

L. R. Winn et al's Mallory 1, C NE NW 32-33n-11w, wildcat 22 miles northeast of O'Neill, Holt County, on the north edge of the Salina Basin, was drilling below 800 feet. This is a cable tool well with a 3000-foot contract.

Missouri

Dan McLaughlin's Johnson 1, NE NW NE 13-65n-21w, near Lucerne, Putnam County, was dry and abandoned at 1792 feet. Mississippi lime was topped at 622 feet, Kinderhook shale at 1039 feet, Devonian lime at 1047 feet, and St. Peter sand at 1720, with 30 feet of dry sand logged.

Jackson County: Clegg et al's Fee 1, NEc NW NE 5-47n-33w, had 85,000 cubic feet of gas from 300-303 feet with total depth of 310 feet.

Clay County: Joe Zajik's Fee 1, SE NW NE 35-51n-33w, in northwestern Missouri, was abandoned at 563 feet, total depth, after logging slight gas shows in the Knobtown sand at 312 feet.

☆ New Mexico

Offset to Grayburg Lime Discovery Not Promising

Efforts to offset Skelly's Grayburg lime well in the Penrose-Skelly field, Lea County, not encouraging; 3 new wildcat starts and one failure.

Lea County: First efforts to offset Skelly Oil Company's recent Grayburg lime discovery in the Penrose-Skelly field are not too encouraging. Amerada Petroleum Corporation's State 1-P-B, northeast offset, swabbed 19 barrels on a 24-hour test after drilling out the plug at 3709 feet. Preparations were being made to acidize with 5000 gallons. Two other wells are trying for the Grayburg lime and are to test soon.

Eddy County: A. J. Hardendorf et al's State-Texas Gulf 1, C NE NE 2-19s-30e, was abandoned at 3310 feet. Cores showed salt from 680-1860 feet, Yates at 2100 feet and Red sand at 3125 feet.

Robert E. McKee et al's R. E. Brainard 1-B is a new wildcat in 11-20s-29e, proposed to 2000 feet, with cable tools. Location is between the Getty and Russell fields.

Harvey E. Yates et al also spudded State-Yates 1, in 32-18s-30e, between the Benson and Leo fields. The test is to be to 2750 feet with cable tools.

Lea County: Carl B. King et al's Santa Fe Railway 1, in 29-9s-37e, is a wildcat 9 miles northeast of Ranger Lake in the extreme northeastern part of the county. This test is about 5 miles west of the old dry hole of Ohio Oil-State McCormick 1, which was a failure at 5658 feet, but did have some encouraging shows. The King test is proposed to 5000 feet, San Andres.

Stanolind Oil and Gas Company is getting ready to start State-Mascho Unit 1, in 31-21s-34e, about 4½ miles southwest of the West Eunice pool.

Oil Industry Motor Mishap Rate Is Lowest in History

The lowest motor-vehicle accident rate in the oil industry in the 13-year records was set in 1944, despite wartime operating conditions, the Department of Accident Prevention of the American Petroleum Institute has reported.

Accidents per 100 vehicles decreased from 15.5 in 1943 to 14.1 in 1944. Accidents per 100,000 vehicle-miles decreased from 1.14 in 1943 to 10.1 last year.

Reports were received from 170 oil companies operating 53.198 motor vehicles and showed details concerning the operation of 48,057 vehicles which traveled a total of 652,515,522 miles during the year. On that basis, each vehicle operated had an average of one accident for 99,347 miles of travel.

☆ West Texas

Devonian Lime Field Is Opened In Gaines County

Amerada strike in northwestern Gaines County opens new Devonian lime field which appears to have important potentialities, due to thick section of pay and first output of the well; other wildcats in various areas show promise and routine field development continues at brisk pace.

Gaines County: With a flow of 900 barrels of 42.7-gravity sweet oil, from perforations at 11,380-420 feet, in the Devonian lime, Amerada Petroleum Corporation's Jones 1-A, opened a new field in the extreme northwestern part of the county. On a 12-hour test the well flowed 900 barrels of sweet oil, gas oil ratio of 225, gravity 42.7. During the first 6 hours production was 372.58 barrels on a ½-inch choke. The last 6 hours showed 527.16 barrels through a 1-inch choke. Devonian was topped at 11,181 feet, the hole drilled to 11,635 feet, and plugged back to 11,422½ feet.

This well made a good show more than a month ago but minor water troubles developed. A plastic plug was set at 11,422½ feet and gun perforations made at 11,380-420 feet with 234 shots. Tubing and packer were run at 11,372 feet and the well swabbed. On a 16-hour test, swabbing yielded 46 barrels of fluid. The well was then acidized with 4000 gallons of acid, with the resulting flow of 900 barrels.

Jones 1-A is about 4½ miles southwest of the Yoakum County sector of the Wasson field, and about 7 miles north of the Russell field.

Flowing production also is probable from the 9000-foot Basal Permian, making the well good for a dual completion.

The extent of production is not known, but due to the thickness of the pay section and the likelihood of production from Basal Permian, the discovery is of unusual significance, and will result in other tests.

Other companies holding acreage in the area include Argo Oil Corporation, Magnolia Petroleum Company and the Atlantic Oil and Refining Company.

Due to the depth of the Devonian wells in the area probably cost from $250,000 to $300,000, hence follow-up completions will not be undertaken without consideration of the risk.

Argo Oil Corporation's Jones 1, Russell field outpost, is drilling below 8980 feet with no shows. Shell Oil Corporation's Cox 2, northeast outpost of Russell field, is making hole below 6060 feet in lime.

The Texas Company's Robertson 3, outpost west of Robertson 1, pool discovery, swabbed 88 barrels on a 3½-hour test from perforations at 5871-5940 feet. Preparations were being made to treat the well with 5000 gallons of acid.

The Texas Company abandoned Parmer 1-B as a failure at 5417 feet. The test was in the southeastern part of the county, 660 feet out of the southwest corner of Labor 12-317-Parmer CSL.

Crane County: Atlantic's 1-A University was reported drilling below 10,308 feet, with some softening in the dolomite. A drill-stem test at 10,240-270 feet with the tool open 1 hour and 20 min-

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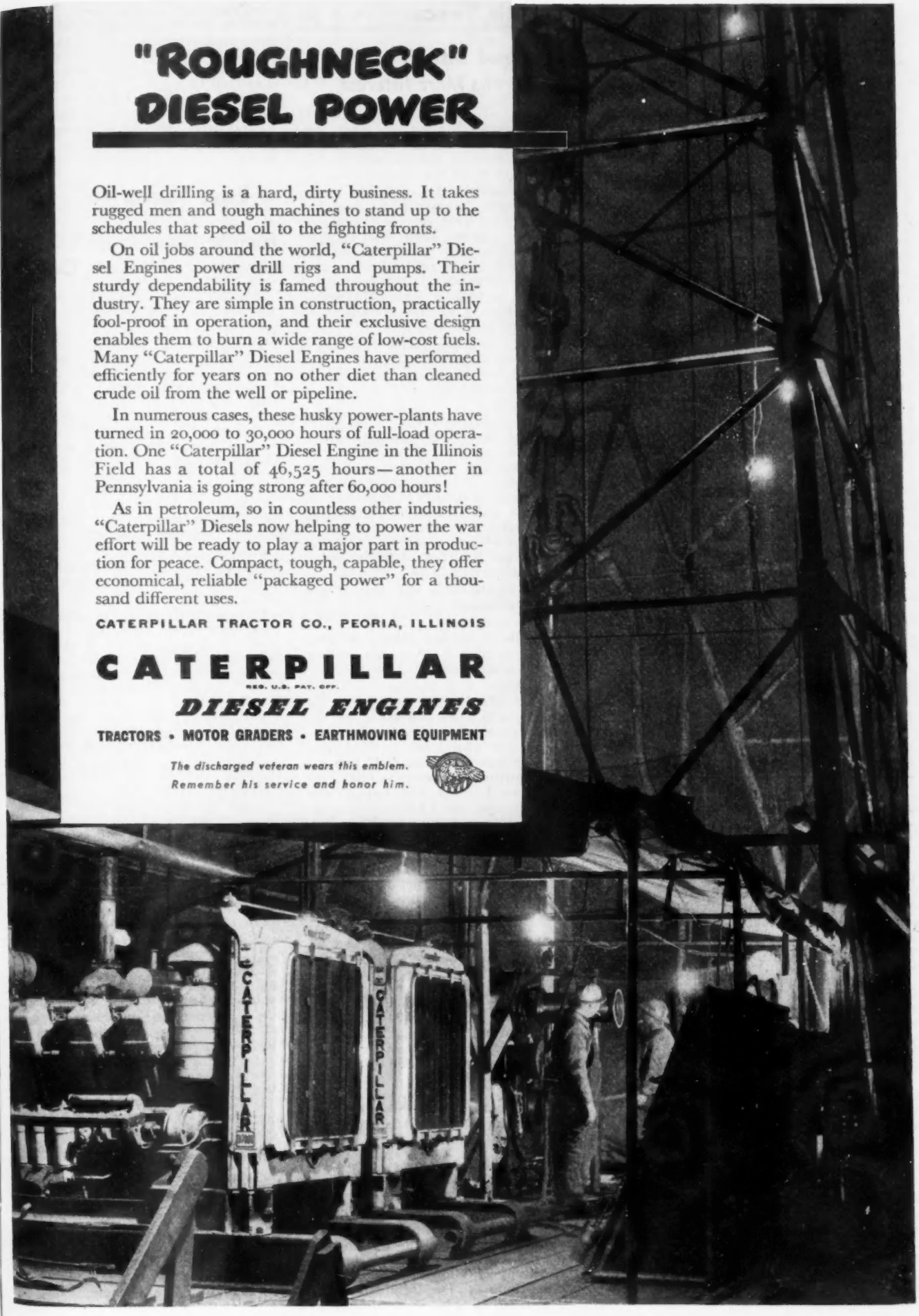

utes failed to recover any important showing. This well is seeking production in the Ellenburger. Atlantic has 10 wells drilling on Block 31 in this area.

Humble Oil & Refining Company's Cowden 1, wildcat northwest of the Crane-Cowden field, was drilling in chert at 7297 feet.

Ector County: Stanolind Oil and Gas Company's Scharbauer 3-C reported no shows after a drill-stem test from 7999-8059 feet, checking for production in the Silurian.

Sinclair Prairie Oil Company's Jessie Mae Williamson 1, probable 2-mile extension to the TXL field, was preparing to shoot after plugging back to 8052 feet from 9923 feet. Swabbing yielded slight shows at approximately 1000 feet off bottom. The well was to be acidized with 2000 gallons.

Midland County: Humble's Mrs. O. P. Buchanan 1, rank wildcat and the deepest in the county, showed slight encouragement in a gas show after perforating from 11,430-515 feet with 255 shots. Two-inch tubing was run to 11,-500 feet and the well was swabbing 6300 feet from the surface. The hole was bottomed at 12,574 feet, and plugged back to 12,540 feet.

Ward County: Slack & Parker's George B. McCamey 1, wildcat 5 miles west of the Lion pool in the Quito area, was shut down awaiting orders after recovering 270 feet of salt water, and a slight section of oil and gas-cut drilling mud on a drill-stem test at 5099-5135 feet. Total depth of the hole is 5135 feet.

Lamb County: Humble's A. M. Arnold 1, Anton pool outpost, was reported drilling below 5625 feet, with a slight show of oil at 5545 feet. Leftwich 1-B, offset producer in the same field, was preparing to test with 5000 feet of oil standing in the hole, and appeared to be good for a pumper.

☆ West Central Texas

Jones County Tests Fail; Two Wildcats Are Started

Two failures reported from Jones County, with 2 wildcats started.

Jones County: Adler Oil Company's Munroe 1 was abandoned at 4013 feet. The test was 952 feet from the south and north lines and 330 feet from the west and east lines, BBB&C Railway survey 98. Elevation was 1683 feet.

Shackelford County: Eltex Ltd's M. Davis 1, T&P Railway survey 30, Block 12, was abandoned at 5218 feet with no shows. Elevation was 1877 feet and the log showed Bend at 4595 feet, Barnett at 4950, Mississippi at 5082, and Ellenburger at 5109.

Routine completions showed 1 well in the Coker field, Coleman County, 1 in the Cooper area, Jones County, a dry hole in Shackelford County, and a dual completion in the Reddin pool, Taylor County.

Jones County: West Central Drilling Company has spudded a wildcat, J. F. Winters 1, Sec. 2, J. F. Winters survey 138. The test is proposed to 2900 feet with cable tools.

Stonewall County: A. R. Dillard et al's Fee 1, H&TC Railway, 161, Block 1, is a location for a 7000-foot Ellenburger test.

☆ North Texas

Sivells Bend District in Cooke Draws More Interest

Sivells Bend district in Cooke County attracts increased attention since discovery of Joe Dillard 1 by Magnolia; 4 other wells drilling; several wildcat failures noted in other districts.

Cooke County: Magnolia Petroleum Company was preparing to install a Kobe pumping unit on Joe Dillard 1, Sivells Bend district, in an effort to effect better recovery. The test kicked off and flowed 71 barrels of oil in 3 hours and died. Later it swabbed and flowed 171 barrels on a 16-hour test. Magnolia's Bush Brothers 1 in the same area is drilling shale below 4115 feet.

Cox and Hamon's Davis 1, about 4 miles east of Magnolia's well, was fishing at 5252 feet. Standard Oil Company of Texas was rigging up for a test in the same area

Sun Oil Company's Kate Allen 1, S. Gann survey north and east of Dillard 1, cored 9 feet of hard gray oil sand at 6724-34 feet, and was coring at 6739 feet. Earlier, a third drill-stem test was made in sand at 6727-6739 feet, and 30 feet of mud and 100 feet of oil-cut mud with no water was recovered. A core from 6724-6734 feet recovered 3 inches of water sand, 8 inches of shale, and 9 feet of hard gray oil sand.

Another producer in the area would result in considerable drilling by several companies.

Benson Brothers and Pace's Whaley 1, wildcat in the E. Yeaman survey A-173, was abandoned at 2468 feet.

Clay County: Continental Oil Company's Stallings 1, 1400 feet from the south and north lines and 467 from the west and east lines of TE&L Company, Sect. 3252, was abandoned at 7115 feet. Ellenburger was logged at 6941 feet.

Throckmorton County: Lion Oil Company's Daws 1, 1400 feet out of the southwest corner of TE&L Company, Sect. 1694, was a failure at 4986 feet. Bend was logged at 3955 feet, and Mississippi at 4703 feet.

Young County: Lesco's Davis 1, 467 feet of the northeast corner of the west ½ Sect. 63, TE&L Company survey, was abandoned at 5080 feet, logging Bend at 4240 feet and Mississippi at 4884 feet.

Fain-McGaha Oil Corporation and R. G. Drilling Company have staked a proposed 4200-foot wildcat, offsetting shallow production from the Strawn in the R. Wilson survey A-1276. Location is 1733 feet from the north and south lines and 330 feet from the east and west lines.

Knox County: Youngblood and Bob Foree have located a 4500-foot test, Bates 1, in the northeast corner of D&W Railway survey 3, Block 2.

Wichita County: Louis Sikes et al's H. C. Obenhaus-Magnolia 1 is proposed to 2400 feet, 2400 feet from the south and north lines and 1640 feet from the east and west lines of the south ½ MEP&P Railway survey A-230.

Wilbarger County: Humble Oil & Refining Company's Ray E. McClintock 1, 5 miles west of the Odell field is to be a 6500-foot Ellenburger test, located in the center of the southeast corner of H&TC Railway survey 22, Block 10.

Wichita County: The Madden field was extended approximately 1⅛ miles west by north this week in W. H. Hammon & Hanlon and Buchanan's Boone 11. The well is 467 feet from the north and south lines and 217 feet from the west and east lines of Block 29, Parker subdivision, S.P. Railway 1, A-264. Initial flow was 1120 barrels of 42 gravity oil, gas-oil ratio, 200 to 1 through ¾-inch choke, in Strawn sand from 4171-4210 feet.

☆ East Texas

Humble Plans 45 wells in Hawkins Field, Wood County

Humble plans 45 wells in Hawkins field; deep pay test in Buffalo field fails; routine completions slow.

Wood County: Humble Oil & Refining Company plans to drill 45 wells in the Hawkins field as rapidly as possible to increase its supply of heavy asphalt crude. Demand for this type of oil for road work especially is expected to increase with the resumption of highway construction. Since relaxation of PAW spacing rules, it is now possible to concentrate more wells on a given acreage, and Humble plans to drop back to 20-acre spacing for all wells outside the townsite area. Within the townsite, smaller sites will be drilled.

Humble completed 2 wells in the Hawkins field last week, and is reported rigging up on two new locations this week.

Leon County: Shell Oil Company and Lone Star's W. L. Tandy 1 failed to secure deep production in the Buffalo field, after drilling to 10,802 feet. Elevation was 391 feet. The log shows Woodbine, 5590 feet; Georgetown 7170 feet; Goodland 6865 feet; Pettit 9622 feet; Travis Peak, 10.084 feet. The well was plugged back to regular pay at 5791 feet and made 100 million cubic feet of gas on open flow, averaging 3 barrels of distillate and 2 barrels of water per million feet of gas.

Bowie County: Northern Ordnance, Inc., Lumpkin 1 was abandoned at 7021 feet, with no shows. The test was located 660 feet out of the southwest corner of E. J. Edwards survey A-211. Elevation was 291 feet, with cores as follows: Pecan chalk, 2330 feet; Woodbine, 3665 feet; Georgetown, 4785 feet; Goodland, 4775 feet; Paluxy, 4829 feet; Glen Rose, 5234 feet; First anhydrite, 6075 feet; and Travis Peak, 6440 feet.

Hopkins County: Magnolia Petroleum Company reported a failure in Beville 1, abandoned at 8709 feet. Location was 1624 feet from the south and north line and 330 feet from the west and east lines, 428-acre lease, Hayden Arnold survey. Elevation was 457 feet. Cores showed Pecan, 2374 feet; Austin, 3893-4005; Sub-Clarksville, 4015; Woodbine, 4533; Georgetown 5275; Paluxy, 6119; Glen Rose, 6742; massive anhydrite, 7790-7950; Hill, 8025; Gloyd, 8225; Young, 8365; and Pittsburgh, 8565.

New Offices Opened

Effective October 1, 1945, the general offices of Fisher-McCall Oil and Gas, Inc., will be 509 Association of Commerce Building, Grand Rapids 2, Michigan. Heretofore general offices have been maintained in Detroit.

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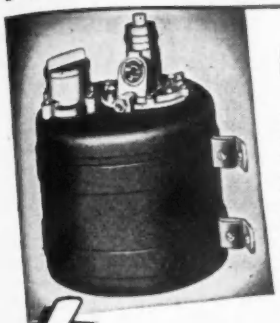

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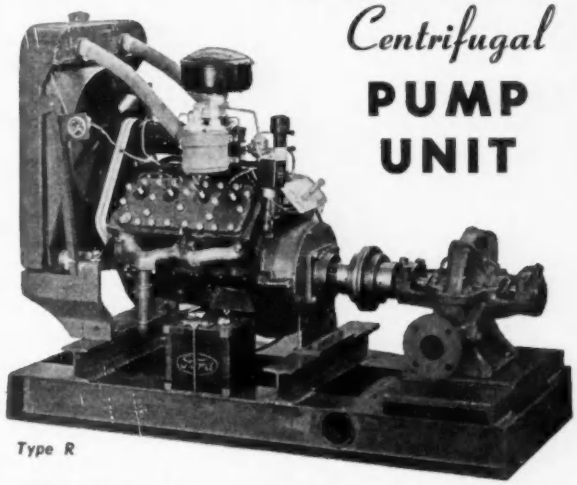

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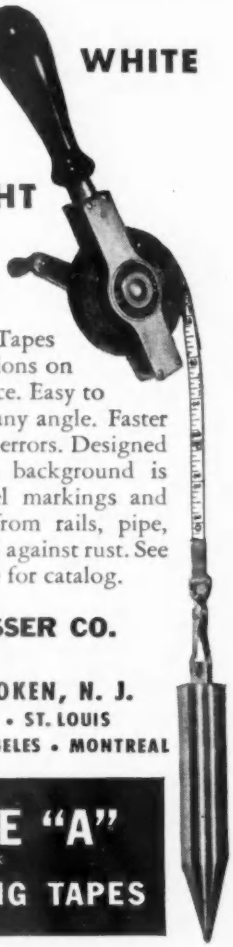

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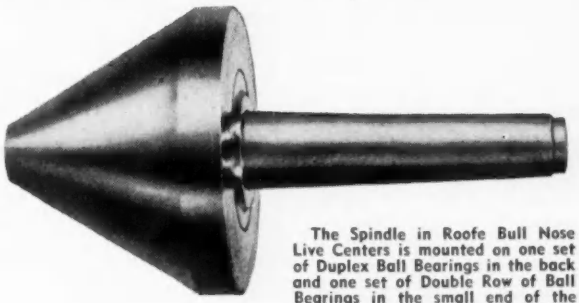

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☆ East Texas Border

Fourth Harrison County Wildcat Is Completed

Fourth Harrison County wildcat completed; Carthage well treating with acid to revive flow of oil; Marion County wildcat coring after oil shows.

Harrison County: Rogers Lacy's Mrs. E. L. Poteet 1, Betty Humphries survey, 4 miles north of Harleton, has been officially completed to open a fourth producing area for the county. The well gauged 57 million cubic feet of gas per day from Rodessa and 2 million cubic feet from Travis Peak. Production is from 45 perforations at 6830-42 feet. Total depth is 7500 feet. Lacy has completed derrick and will move in rig immediately at Hayman 1, Tally survey, a 7000-foot wildcat 4 miles west of Marshall.

H. T. Manning's G. Vincent 1, R. W. Bedford survey, is swabbing to test after perforating with 10 shots from 6145-51 feet. A 1-hour drill-stem test of perforations from 6145-51 feet recorded a good blow and recovered 800 feet of water-cushion and 4000 feet of salt water. These perforations were squeezed and 60 shots made at 6104-34 feet. Another 1-hour drill-stem test received a good blow, mud and drilling water.

Stanolind Oil & Gas Company cemented surface pipe in Hattie Cole 1, Charles Taylor survey, and is drilling at 408 feet in sand.

Panola County: Sun Oil Company's Sallie J. Neal A-1, John R. Garner survey, 5 miles north of Carthage townsite on the flank of the field, is being treated in attempt to complete. The well went dead after flowing a stream of 32.8-gravity oil for 2 hours through ½-inch choke. Operators had difficulty with formation caving and some of the cement with which the well was plugged at 4969 feet went into the formation, plugging the pay to some extent. The production zone is not determined, but it may be the Bacon lime. The extensive development of the Carthage field likely will receive even more intense drilling if oil production is a certainty on the flanks of the field.

Shelby County: M. E. Davis' Pickering Lumber Company 1, W. J. Brittain survey, is preparing to swab perforations from 5770-95 feet. Previous perforations from 5700-02 feet were squeezed. The well encountered showings in the Rodessa and leasing is active in the area. Total depth is 7515 feet.

Humble Oil & Refining Company's Pickering Lumber Company 1, deep wildcat test in the St. Francois survey, is drilling below 10,805 feet.

Marion County: Stewart Oil Company's Brown Estate 1, Joseph Watkins survey, 3½ miles northeast of Jefferson, is reaming at 6825 feet to core deeper. A core from 6809-22 feet recovered sand with good odor and taste of oil and slight stain. Another core from 6822-25 feet recovered sand with good odor and taste and slight stain with bleeding pinpoints of oil.

Rogers Lacy's wildcat Wade Scott et al, Alexander Johnson survey, has rigging up.

San Augustine County: M. E. Davis' C. Thomas 1, W. B. Horn survey, is at 9274 feet and swabbing to bottom for its sixth drill-stem test after perforating with 100 shots from 9092-9112 feet.

Nacogdoches County: Magnolia Petroleum Company's W. L. Harrell 1, W. Wray survey, is delayed by a fishing job at 6975 feet.

Red Sea Horse

The house flag and funnel mark of Socony-Vacuum Oil Company have been registered by the Commissioner of Customs.

The house flag is a swallow-tail burgee pennant, bearing a white field upon which is superimposed a red Pegasus, or winged horse, above and below which at the top and bottom edges of the pennant are navy blue stripes.

The funnel mark consists of a white shield on a black funnel with a navy blue stripe around the entire shield near the edge, on which shield there is imposed a red Pegasus.

☆ South Central Texas

Tests Made on Wildcat Gas Discovery in Dimmit County

Series of tests made on Dimmit wildcat gas discovery; important wildcat to be drilled in Medina County; Humble spuds Atascosa wildcat.

Dimmit County: Tests have been conducted at Calatexia Oil Company's S. E. McKnight 1, wildcat gas discovery well 4½ miles southwest of Carrizo Springs. Perforated at 2638-45 feet, the well flowed 296,000 cubic feet of gas daily through a ⅛-inch choke with a working pressure of 835 pounds. Through a ¼-inch choke the flow was 725,000 cubic feet daily with a working pressure of 475 pounds. Open flow volume is estimated at 1,350,000 cubic feet of gas daily. Total depth is 2995 feet with 5½-inch casing set at 2757 feet.

Medina County: An important wildcat will be drilled in the old Adams gas area northwest of Devine. It is Ralph E. Fair, Inc.'s G. C. McAnnelly 1, Edmund C. Durst survey. It is about 1000 feet north of Southern Gas Utilities abandoned Nixon 1 gas well. The old Adams gas field produced from the Navarro series at about 1000 feet. The McAnnelly 1 is scheduled to 6000 feet.

Atascosa County: Humble Oil & Refining Company has spudded a wildcat ¾ mile southwest of Jordanton. It is Henry Schorsch 1, Edward Estes survey, and projected depth is 8000 feet.

In the Imogene field, Humble spotted H. H. Coward 6, Galba Fuqua survey.

Bexar County: H. A. Pagenkopf's Max Blum 1, deep test in the gas Ridge field, was drilling below 4075 feet in sandy shale.

Parker & McCune's T. J. Goad 1, wildcat 10 miles south of San Antonio, is below 1000 feet in shale.

Bastrop County: A new wildcat has been staked 5 miles northwest of McDade. It is the John A. Drossos of San Antonio and A. J. Caldwell 1, G. J. Glasscock survey.

Continental Oil Company's Frank Rundus 1, wildcat in the Medford league, was drilling in shale below 3700 feet.

Gonzales County: Quintana Petroleum Corporation's Anna Spahn 1, wildcat 4 miles northwest of Gonzales, was drilling in sandy shale below 6000 feet.

☆ Southwest Texas

Wildcat Failures Outnumber New Projects During Week

Wildcat failures overshadow new starts in Southwest Texas; Goldston to spud in Starr County; 3 McMullen wells abandoned.

Starr County: W. L. Goldston of Houston is moving in material for a wildcat 10 miles northeast of Rio Grande City. It is the Roos & Bennet 1, Porcion 93.

Another wildcat location for Starr County is B. H. Cummings' Starr County Cattle Company 1, Porcion 89, about 13 miles northeast of Rio Grande City.

McMullen County: Wildcat abandonments numbered more than locations in this area during the week. The lone wildcat was staked by Argo Oil Corporation 7 miles northeast of Seven Sisters as John E. Murphy 1-D, BS&F survey.

About 10 miles west of Loma Alta field, Midstates Oil Corporation's Nueces Land & Livestock Company 1 was a failure at 1605 feet.

Quintana Petroleum Corporation halted 2 tests. The company's Ethyl Craig 1, 3 miles southeast of Fowlerton, was abandoned at 5798 feet and the South Texas Syndicate 7-F, 10 miles south of Fowlerton, was dry at 6640 feet.

Duval County: Butcher-Arthur, Inc., and Taylor Refining Company's C. M. Robinson 5, Robinson field, was abandoned at 4950 feet.

Kilgore Developers' C. L. Palacios 1, Sejita field, was dry at 5900 feet.

Hearing Delayed

Hearing on an application for a new well spacing order in a part of the Bethany pool, Oklahoma County, Oklahoma, has been postponed by the Oklahoma Corporation Commission until October 2. The original application by Phillips Petroleum Company and others called for a revision of the West Edmond field spacing order as to 20 sections, but the area was reduced by evidence to include parts or all of only five sections.

☆ Lower Texas Coast

Wildcats in Three Counties Given Completion Tests

Completion attempts under way at wildcats in Bee, Jim Wells and Goliad counties; second well completed in Hinnant field; Nueces wildcat logs sand.

Bee County: A production attempt is under way at Tom Graham's Theis et al 1, wildcat 16 miles northwest of Beeville, R. S. Barnes survey. With total depth of 3587 feet, operator set 7-inch casing at 3571 feet to test sand at 3571-79 feet. Drill-stem tests at 3565-87 and 3573-87 feet recovered some oil and oil-cut mud.

Live Oak County: The second test for the recently opened Hinnant field, 11 miles northwest of Mathis, has been completed as a gas well. Ivey & Moran's William Hinnant 1 was finaled in sand at 2171-90 feet without a gauge. Tubing pressure was 975 pounds and casing pressure 1000 pounds. The discovery well

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☐ Safety Automatic Pressure Releases (Mud Pumps)

was completed in an oil sand at 5772-80 feet.

Jim Wells County: Production tests are being made at Slick Oil Company's R. R. Mullen 1, wildcat 3 miles south of Alice in the J. Poitevent survey. Perforated at 4514-20 feet, the well recovered 1800 feet of oil and mud and 380 feet of salt water through a ¼-inch choke in 30 minutes. A 1-hour test at 4510-14 feet recovered 300 feet of mud, 1000 feet of oil-cut mud, and 800 feet of salt water through a ¼-inch choke. After a squeeze job, operator perforated at 4494-4502 feet and a new test is being made.

Nueces County: L. M. Lockhart's E. H. Hermann 1, wildcat test 5 miles northeast of Banquete and about 1½ miles northeast of the Agua Dulce field, is drilling to contract depth of 7000 feet after picking up several sands below 6500 feet. The Comstock sand showed gas and the Wright sand produced oil and water on drill-stem tests. Another lower sand showed distillate.

Goliad County: Gintlier, Warren and Ginther's Carrie G. Wood et al 3, about 4800 feet northeast of the Wood 1 gas discovery well in the Sarco Creek field, is making a drill-stem test in sand at 4150-57 feet. The discovery well was completed in a gas sand at 4200 feet.

Santa Clara Oil Company has located a 4500-foot wildcat 3½ miles east of Goliad. It is Ida P. Huggins 1, Ybarbo survey.

Hidalgo County: The Chicago Corporation is preparing to drill a 9000-foot test in the Los Indios field, 5 miles northwest of Linn. It is the W. L. Goldston 2, about 5000 feet southwest of Goldston 1.

☆ Upper Texas Coast

New Development Likely on Boling Dome North Flank

New development seen on north flank of Boling dome; North Houston outpost testing; Austin County wildcat near contract depth; Pinehurst field extended.

Wharton County: New development is indicated on the north flank of Boling dome where oil production recently was established. Union Oil Company of California's Hawes 2, John Huff league, south of the oil Discovery well, bottoms at 5012 feet where 5½-inch casing has beet set for completion. The discovery was completed through perforations at 4550-70 feet and flowed 155 barrels of 25.9-gravity oil daily through a 3/16-inch choke.

Northwest of Union of California's Hawes 1, discovery well, Pan American Production Company has staked Lena Buller 1, John Huff league.

On the west side of Boling dome, Cecil Hagen & Jack Frazier's A. A. Mullins 2, S. F. Austin league, has been completed for 258 barrels of oil daily through a ¼-inch choke from perforations at 2376-2404 feet. Tubing pressure was 320 pounds and casing pressure 450 pounds.

Harris County: About 1 mile north of the North Houston field, Union Producing Company's Langtry et al 1, ECRR survey, is making a drill-stem test in oil sand at 6992-7002 feet.

Northwest of Huffman, J. C. Wynne et al's S. & H. Royalty Company, J. H. Isbell survey, has spudded.

Austin County: Union Producing Company's John E. Hintz 1-A, Wilcox sand wildcat test in Sec. 179, H&TC survey, is coring near contract depth of 9000 feet after recovering salt water on a drill-stem test at 8808-29 feet.

Washington County: Rutledge & Clark's Strzelecki 1, Miller survey, wildcat 4 miles north of Chapel Hill, was making a new drill-stem test around 6700 feet after recovering salt water at 7003-06 feet and 7008-13 feet.

Hardin County: The Texas Company has staked a 9000-foot wildcat in the Sour Lake area. It is the S. J. Jones 1 in the W. M. Young league.

West of the Village Mills discovery well, Houston Oil of Texas and American Republics Corporation's Hardin-Fee 4 is testing in sand in the Wilcox formation. Total depth is 9039 feet.

Montgomery County: Final completion has been made at Pan American Production Company's J. M. Winslow 1, about 1 mile east of production in the Pinehurst field. Perforated in the upper sand at 10,325-345 feet, the well flowed 78 barrels of 50.8-gravity oil daily through a 20/64-inch choke. In the lower perforations at 10,985-11,004 feet, the well gauged 96 barrels of condensate daily through a ¼-inch choke. Another location east may indicate a linking of the Lake Creek and Pinehurst fields.

$1 Million Oregon Asphalt Refinery Will Be Built

An asphalt refinery costing more than $1 million will be built at Willbridge, Oregon, six miles northwest of Portland, by the California Asphalt Corporation, a newly formed subsidiary of Standard Oil Company of California, President H. D. Collier of the oil company announced.

Construction of the plant, the only asphalt refinery on the Northwest Pacific Coast, will start within 30 or 40 days.

A complete operating unit in itself, the refinery will manufacture asphalt from crude shipped in tankers from California oil fields. Capacity of the installation will be between 4000 and 5000 barrels a day.

Asphalt made in the new plant will be marketed in Oregon, Washington and Idaho primarily for road paving purposes.

☆ South Louisiana

Deep Wildcats Are Staked; Cameron Project Is Testing

Wildcat activity boosted; deep tests staked in Beauregard, Jeff Davis, and Iberville parishes; wildcat in Cameron Parish is testing; Welsh dome flank test is failure.

Beauregard Parish: Sun Oil Company is preparing to start operations at Rice Land and Lumber Company 1, 12,000-foot wildcat in the Singer area, as wildcat operations in South Louisiana showed a sharp increase. The Sun test is in 32-4s-11w.

Magnolia Petroleum Company also has staked a 9000-foot test in the Oretta area. It is the M. J. Witzki 1 in 22-6s-11w.

Cameron Parish: Continental Oil Company and Sohio Petroleum Company's A. Dobbertine 2, deep wildcat in the Johnson Bayou area, 9-15s-14w, is pre-

Another Pause That Refreshes

Coca-Cola talks about "The pause that refreshes," but a pleasant pause is not irrevocably confined to periods when you stop for a cold drink. The only thing we try to bottle up is business, but we know a thousand and one men who welcome an opportunity to TRY PELCO FIRST—and personally. We enjoy this business of vending supplies and equipment. We enjoy our customers. Perhaps contact with all this constitutes another pause that refreshes.

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paring to attempt completion in the 9000-foot section. This wildcat drilled to 13,005 feet and liner was set to about 9100 feet. Perforations were made at 9050-55 feet for a squeeze job before the first completion attempt in the Miocene formation.

Testing operations are still under way at Magnolia's Lutcher 1-A, wildcat in the Mud Lake area. A test at 11,420-430 feet showed gas and operator has re-perforated at 11,040,042 feet for a new test.

Jeff Davis Parish: Sohio has located a 10,800-foot wildcat test in 15-10s-6w. It is the Claudius Fontenot 1.

Tide Water Associated Oil Company's T. S. Stegall, wildcat test on the flank of old Welsh dome, has been abandoned at 8071 feet.

Stanolind Oil & Gas Company still is conducting tests at W. G. Tupper 1-B in the South Elton field. New perforations have been made at 8991-9001 feet.

Iberville Parish: Humble Oil & Refining Company has staked a wildcat in the Bayou Sorrell area. It is the Baist Cooperage & Lumber Company 1 in 92-10s-10e.

Humble's C. G. Robinson 2, extension test in the Laurel Ridge field, is drilling in sandy shale at 8109 feet.

Calcasieu Parish: Deep tests are active in this area. Union Sulphur Company's Bordages 1, wildcat in 5-10s-9w, is setting protection string in a sidetracked hole at 8299 feet.

Gulf Refining Company's Louisiana Sulphur Mining Company 2-A, on the south flank of the Edgerly dome, was drilling in shale below 9230 feet.

☆North Louisiana

Field Southwest of Delhi Production Is Opened

Richland Parish field increases activity in northeast Louisiana; Lincoln Parish wildcat flows wet gas; wildcats staked in Richland, Caldwell, Grant and Franklin parishes.

Richland Parish: R. J. Caraway's Bryant 1, C SE NW 35-17n-8e, gauged 199 barrels of 40.5-gravity oil in 24 hours through 7/8-inch choke on tubing, officially opening a field 2½ miles southwest of Delhi production. Production is through perforations from 3146-69 feet. Total depth of 3302 feet, with 5½-inch casing cemented at that depth. Caraway has applied for permit to drill Bryant 2, SE NW 35-17n-8e, on the same 40-acre tract as the discovery.

Three new tests have been staked in the Big Creek field, southwest of the new field. Southport Petroleum Company's W. D. Byrd 1, C SE NE NE 5-16n-8e, in Big Creek, was ordered abandoned at 3016 feet. It is on the 40-acre tract west of the discovery well and apparently failed to log the sand from which the pool opener is producing.

Charles H. Murphy, Jr., and Sun Oil Company's J. E. Holt 18, NW 29-17n-9e, in Delhi, logged 96 feet of saturation 50 feet below the established water level of the field. The test is waiting on cement after setting production sand and seems certain to extend production a location west.

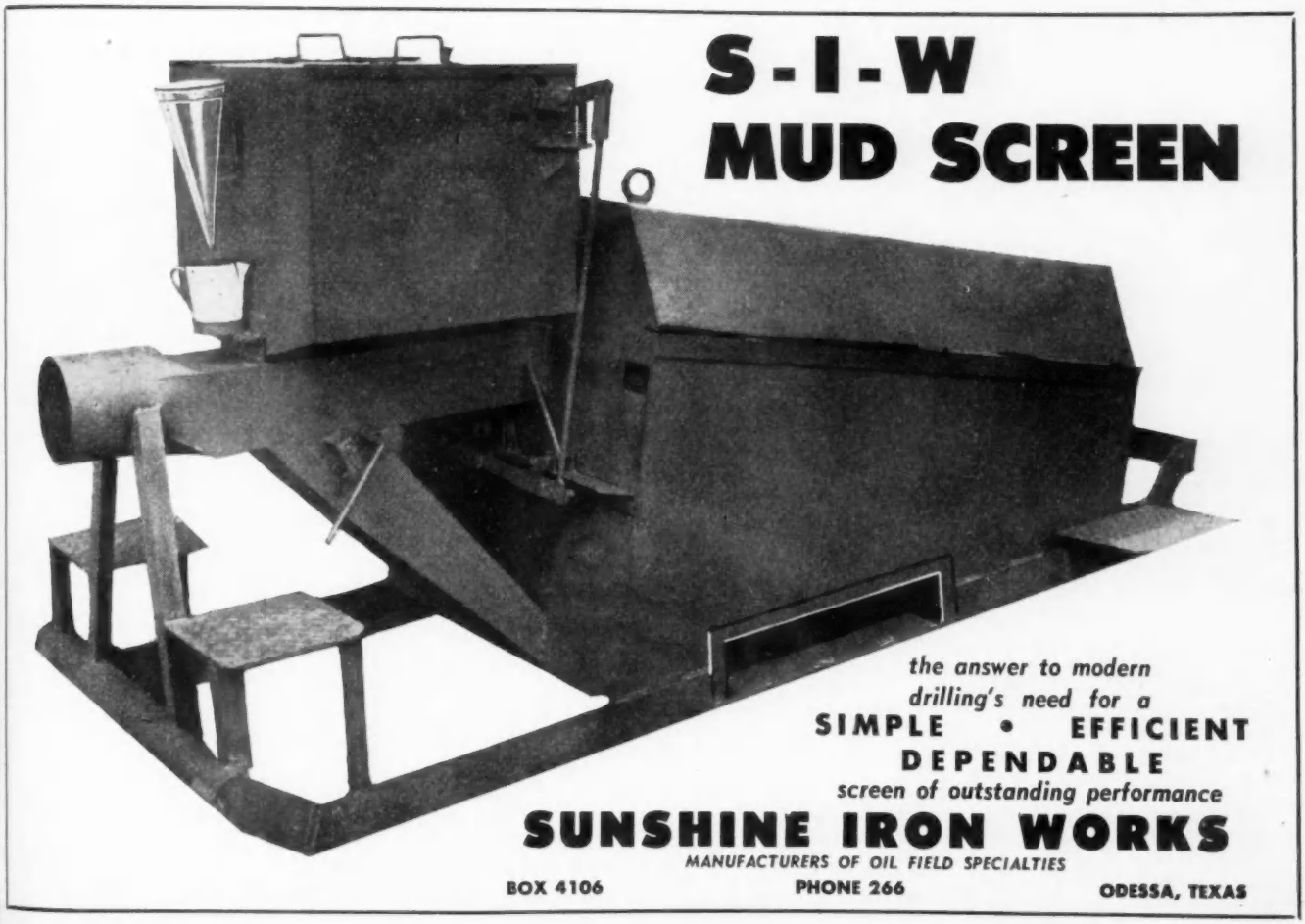
Warren Petroleum Corporation has staked a Massive Anhydrite test, Hemler-Scott 1, NEc 2-16n-7e, 4 miles due west of Big Creek.

Lincoln Parish: The California Company's M. H. Nobles et al 1, 12-19n-4w, perforated with 300 shots from 8705-52 feet in the Bodcaw sand of the Cotton Valley and recorded a flow of 3,500,000 cubic feet of wet gas per day through 3/16-inch choke, with a tubing pressure of 3000 pounds. Operators may perforate higher up in another Cotton Valley section. The well was plugged back to 8760 feet from 9137 feet.

The company has applied for a permit to drill Mary Lou Caver 1, C SW SW 11-19n-4w, as a 9000-ft test, 1 mile west of Nobles 1. California is drilling past lost tools in W. W. Norris 1, 13-18n-1w, second test in the Tremont field, which had reached 9490 feet when the fishing job was necessitated. Sufficient saturation has been logged to insure production. California has been granted a permit to drill D. E. O'Neal 1, C NW NE 16-18n-1w, a proposed 9500-foot test in the Tremont field.

Bossier Parish: Barnsdall Oil Company and Sohio Petroleum Company are drilling below 9103 feet in the Cotton Valley in Padgett-Bundy 1, C NW SE 17-20n-12w, a well which may extend the Benton field 1½ miles southeast. A fishing job was completed at 8903 feet. Gas-distillate showings have been logged in the Cotton Valley "D" sand, in Bodcaw and Davis sands.

G. H. Vaughn's Katie O. Padgett 1, C SW NE 1-20n-13w, 1½ miles north-



west of the Benton discovery, is drilling below 7183 feet in shale and sand.

Claiborne Parish: H. C. Owens' wildcat, Thomas Crichton 1, NE 1-20n-8w, Homer area, is conditioning hole after a fishing job. An encouraging show of oil on another test was reported from a Cotton Valley sand at 6530-40 feet. A drill-stem test was not run. Total depth is 6625 feet in shale.

Delta Drilling Company and M. J. Houston are drilling below 6270 feet in shale and sand in Gladney 1, 10-21n-8w, north flank of the Homer field. Travis Peak was topped at 5746 feet, by samples.

Caddo Parish: United Carbon Company took a drill-stem test of the Pettit lime from 5654-5724 feet, and recovered drilling mud with salty taste but no showing of oil or gas in T. R. Grayson Lumber Company 1, 30-19n-15w, wildcat in the Longwood area. A core from 5714-24 feet recovered 6 feet of lime with show of oil and gas and 4 feet of lime with odor. The well will be drilled to the Travis Peak.

H. M. McBride's Texas Company-J. S. Jolly 1, wildcat in 27-22n-15w, is drilling below 2310 feet.

Caldwell Parish: Shell Oil Company recovered salt water on a drill-stem test from 7933-43 feet in the Travis Peak at Louisiana Central Oil & Gas Company 2, second test in the Vixen area, 36-15n-2e. Drilling continues below 8143 feet in lime and shale.

Big West Drilling Company, now drilling below 3889 feet in W. E. Cruse 1, SE NW 1-11n-3w, Wilcox test in the Clarks area, has staked a wildcat, Arthur McKee 1, NE 1-11n-3e, also a Wilcox test in the same area.

Ouachita Parish: California's Walter Maxey 1, 32-18n-1e, is below 8738 feet. The tight wildcat is reported to have logged shows in the Travis Peak.

Madison Parish: Sohio Petroleum Company's wildcat W. L. Etheridge 1, 3-14n-12e, is drilling below 5603 feet, with no shows.

De Soto Parish: H. R. Randall's Simmons-Federal Land Bank 1, C SE NE 36-15n-15w, wildcat on a 2500-acre block, is reported checking favorably and drilling below 3625 feet. Kerlyn Oil Company's wildcat Frost Lumber Company 1, C NE SW 7-11n-12w, is below 1100 feet.

Franklin Parish: C. W. Sharp is preparing to move in at Baker 1, C SE SE 27-16n-9e, a new wildcat.

Grant Parish: D. H. Williams has obtained permit for H. A. Strong 2, C SE SE 28-9n-1e, wildcat Wilcox test in the Selma area.

☆ Arkansas

Shallow Ouachita County Field Officially Opened

East Stephens field, Ouachita County, officially opened; first oil production in Patton field; important Miller County wildcat drilling without shows.

Ouachita County: McAlester Fuel Company's Charles Wasson 1, C NE NE SW 24-15s-19w, gauged 96 barrels of 33-gravity oil during official 24-hour test through ⅛-inch choke, opening the shallow East Stephens field. Production is through 72 perforations from 2648-80 feet opposite the Glen Rose topped at 2646 feet. String of 5½-inch casing was cemented at 2878 feet. The fault cut in the Nacatoch and Saratoga sections is thought to control production in the shallow Stephens field northwest. McAlester and T. W. Lee are drilling below 2600 feet in an offset, Hogg Estate 1, C NE SE SW 24-15s-19w, due south of the discovery. Most of the area is already under lease but royalty transactions are bringing high prices.

Lafayette County: Barnsdall Oil Company and Sohio Petroleum Company have officially completed the first oil well in the Patton gas-distillate field, Moore Heirs 1, C NW SE 32-17s-24w, flowing a daily rate of 518 barrels of 44.8-gravity oil through ¼-inch choke on tubing. Production is from the Smackover lime through 31 perforations opposite 9316-19 feet, after treatment with 2500 gallons of acid. Production casing was cemented at 9322 feet, total depth. The well is ½ mile southeast of Tide Water Associated Oil Company's Bendaw 1, NE NW Sect. 32, and is 25 feet lower on structure.

Mid-Continent Petroleum Corporation made location for another Smackover lime test, staking O. S. Moore 1, C SE NW 33-17s-24w.

Miller County: Barnsdall Oil Company's W. S. Nichols et al 1, C NE NW 20-18s-28w, topped the Cotton Valley by samples at 7830 feet, cored from 7903-11 feet, recovering 6 feet of porous salt water sand and 1½ feet of green silty shale. Drilling continues below 7923 feet.

Union County: R. C. Wallingsford has derrick up on W. P. Wineman 1, C NW SW SE 13-18s-13w, a new wildcat test, 2 miles southeast of production in the Urbana field. The well is in an area of considerable faulting.

Columbia County: Crescent Drilling Company's Edna Hawkins 1, C SE NW 8-17s-18w, 2 miles northwest of Mt. Holly production, is drilling below 4275 feet without showings.

White County: Lion Oil Refining Company's Nalley 1, SE NE 33-8n-7w, is below 5060 feet without showings.

☆ Mississippi

Marion County Hub Field Propect Shows Up Well

Hub field prospect in Marion County shows up well; wildcatting active in Wayne County; 4 new producers in Cranfield field; Superior abandons Stone County prospect.

Marion County: Humble Oil & Refining Company's A. E. Ball 1, NWc 20-2n-14e, in the 1-well Hub field has given definite indications of being a better producer than the discovery completed in March. A very high degree of correlation was noted in the producing zones of both wells, but whereas the A. Evans 1 was completed as a gas condensate producer with production from the Massive sand at 9127-29 feet, casing on the Ball well was perforated at 9125-27 feet and swabbed in. On a 6-hour test through ⅛-inch tubing choke the well flowed at the rate of 108.5 barrels a day with a gas-oil ratio of only 250/1. Tubing pressure was 1500 pounds and gravity of oil was 38. Subsequently the well flowed 35.2-gravity oil through a 5/32-inch choke with gas-oil ratio running at the higher rate of 705/1. Earlier in the week a test had been run at 9112-17 feet and after swabbing the well flowed at the rate of 149 barrels of 42-gravity oil and 1,690,000 cubic feet of gas per day which would indicate correlation with initial production of the discovery well which had a gas-oil ratio of 16,000/1. Humble also is pushing operations for E. O. Ball 1, to be in SWc 17-2n-14e, Hub field. Gulf Refining Company's E. H. Bradshaw 5, wildcat in NEc 28-3n-17w, has been abandoned after extensive coring produced nothing encouraging. Total depth was 6828 feet, with Eutaw zone topped at 5672 feet.

Wayne County: Humble's G.M.&O. Ry. E-1, NEc 30-9n-7w, wildcat, is preparing to test after cores from 7100-49 feet recovered no shows. In a previous drill-stem test at 6965-83 feet only salt water, mud, and water cushion were recovered in a 1½-hour test. Neither of Humble's 2 other tests in the area have reported anything encouraging. G.M.&O. Ry. D-1, SWc 23-7n-7w, is drilling below 7500 feet after testing salt water and mud from 7249-74 feet. Eutaw was topped at 5757 feet. Humble's U.S.A. 1, NW SE 23-7n-9w, is coring below 8164 feet with no shows indicated at any point. Woodley Petroleum & Premier Oil Refining Company's U.S.A. 1, SEc SW 28-7n-9w, is drilling below 6415 feet after cores from the Eutaw at 6275-89 feet recovered only salt water.

Lawrence County: Humble's V. L. Parkman 1, SW c 8-6n-20w, wildcat, is drilling below 8000 feet after running electrical log to 7798 feet. The well originally had been drilled to 7588 feet where it was bottomed in salt. Then it was plugged back to the 3300-foot level and whipstocked. Before the operation porous sand had been encountered below 6500 feet although no shows were noted.

Lincoln County: Roeser & Pendleton's W. L. Case 1, SEc 8-7n-7e, has been completed to extend production in the 1-well field southwest. In its initial test the well flowed 241 barrels of oil per day through a 5/16-inch choke. Gravity was 37.3. Production is from the lower Tuscaloosa horizon at 10,238-54 feet.

Adams County: Four good producers were completed in the Cranfield field last week. The California Company's A. M. Ratcliffe 1, 46-7n-1w, had an initial flow of 120 barrels per day of 40.8-gravity oil with production from 72 perforations at 5870-82 feet. California's A. M. Ratcliffe 2, 46-7n-1w, also was completed with initial production of 130 barrels per day. The company's Ella G. Lees 4 and 7, in 29-7n-1w, were completed in the Massive sand below 10,249 feet with initial flows of 270 and 309 barrels, respectively. Gas-oil ratio was 1000/1.

Yazoo County: Skelly Oil Company's A. Bridgeforth 1, SEc 17-12n-2e, wildcat, was abandoned at a total depth of 6717 feet in the Comanchean sector after no shows had been recovered. Massive sand was topped at 6393 feet. The Carter Oil Company's Allen Bridgeforth 1, NW SE 24-12n-2e, only other prospect in the area, also was abandoned at 5627 feet after failure to encounter any shows. Union Producing Company's Jennie Stevens 21, NWc 12-10n-3w, Tinsley field, which had plugged back to complete in the 5000-6000-foot zone after discouraging explorations of the Smackover horizon below 11,000 feet, was preparing to squeeze after a test at 5396 feet recovered salt water with slight shows of

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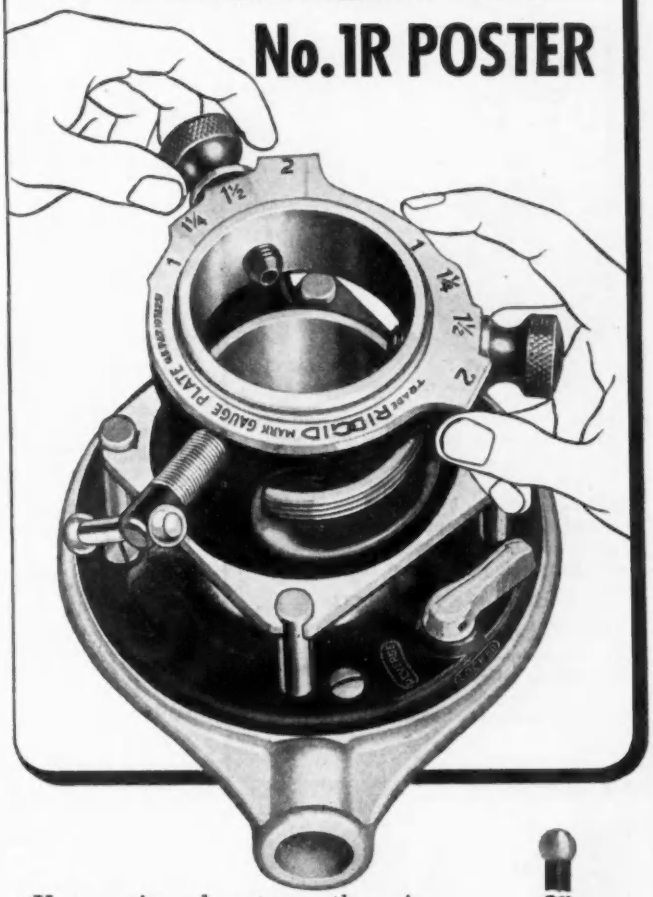

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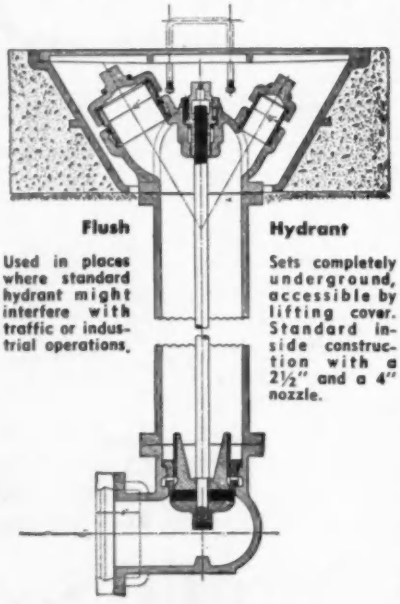

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oil. Tests of the zone have not been too successful, as quantities of salt water have been recovered. Sohio Petroleum Company's Brumfield B-8, NWc SW NE 2-10n-3w, Tinsley area, is drilling below 4250 feet with oil producing sands yet to be encountered.

Stone County: The Superior Oil Company's Wilbe Lumber Company 1, SE SE 20-3s-10w, has been abandoned in the Comanchean horizon at 8805 feet after reporting no shows. The Eutaw zone was topped at 6908 feet and the Tuscaloosa at 6967 feet. Massive sand was found at 8271 feet. Harry I. Morgan's G. A. Breland 1, C NW NW 26-2s-11w, is drilling below 3800 feet with no shows indicated. George Vassen & Associates are preparing to make a test of the area with their Tung Corporation of America, C NE NE 9-2s-11w.

☆ Alabama

Water-Oil Ratio Improved In Gilbertown Discovery

Water-oil ratio improved on latest test of East Gilbertown discovery; second well in field preparing to complete; wildcat started.

Choctaw County: The Carter Oil Company's Sam Allman 1, SWc NE SW 5-10n-3w, discovery well of the East Gilbertown field, continues to experience some trouble with salt water. Latest test of perforations from the producing section of the Eutaw pumped 4 barrels of salt water to 14.2 barrels of oil in an 8-hour period. This is a better oil-water ratio than any tests have previously recorded. Carter is preparing to complete the field's second producer, Caroline Moseley 1, C SW SE NW 5-10n-3w, north offset, and is now swabbing after a drill-stem test at 3240-3327 feet yielded 310 feet of clean oil and 560 feet of oil-cut mud in 2-hour test. Well is bottomed in Eutaw at 3327 feet.

Hunt Oil Company's Land 5, C SE NE 31-11n-4w, Gilbertown field, has installed pump after reaching 3651 feet. In latest effort the well tested only salt water and mud and drillers have plugged back to 3300 feet to test that level, which had good shows of oil previously.

Washington County: Wayne Refining Company's Willie Mitchell 1, SEc NW NE 12-8n-3w, wildcat abandoned last July after losing drill-stem in hole, and which later resumed operations, swabbed water in a test at 1066-70 feet. Perforations were squeezed out and well is drilling deeper.

Southern Natural Gas Company has taken over J. T. Parks' Hobson 1, C SW NE 9-8n-2w, and is drilling below 4230 feet in shale. It was abandoned in July at 3185 feet. Depth to which well is being carried is not known.

Wilcox County: Southern Natural Gas Company is drilling below 6910 feet in Morgan 1, C SE SE SW 32-12n-5e, among the deepest tests drilled in the state.

Clarke County: Bering Oil Company is drilling water well for a new wildcat, A. C. Gordon et al 1, C SW NW 15-7n-4e.

Florida

Humble Oil & Refining Company's G. C. Carleton Estate 1, C SW NE 34-38s-29e, Highlands County, wildcat deep test, is drilling below 10,990 feet in hard lime.

Collier County: Humble's Sunniland deep test, Gulf Coast Realty Company 7, SW NE 17-48s-30e, is at total depth of 10,350 feet in dolomite. Drilling will be resumed as soon as the road, damaged by the recent hurricane, is repaired.

Charlotte County: Humble's Lownes-Treadwell 1-A, C SW NE 17-42s-23e, is below 9992 feet in anhydrite.

Calhoun County: The Pure Oil Company's International Paper Company 2, 31-1s-10w, is drilling shale and sand at 4022 feet.

Monroe County: O. D. Robinson's State 1, NEc NW¼ 29-59s-40e, lost circulation at 6360 feet, cemented with 250 sacks of cement, and will resume drilling.

AGA Convention

The annual meeting of the American Gas Association will be held in the Engineering Societies Building, 29 West 39th Street, New York, October 24 and 25.

The mornings will be devoted to general sessions while the afternoons and evenings will be given to meetings of departments, sections and general committees.

Sales Tax Set

The State Tax Commission has approved a proposal of the Oil and Gas Association of Michigan to levy the state sales tax (3 percent) only on 10-inch or larger sizes of surface casing and exempt all other strings, derricks, engines, tanks, lead lines etc.

☆ Michigan

Wildcat in Montcalm County Flows from Dundee Limestone

Montcalm County wildcat flows from Dundee limestone; deep test in Rose City field logs pay in Sylvania; once-abandoned wildcat in Huron County has been reworked and returned to production; another wildcat, rated a field discovery 3 weeks ago, is abandoned.

Montcalm County: Leslie T. Barber and Union Drilling & Producing Company's Gyger 1, W½ SE NW 1-11n-7w, Douglass Township, logged Dundee lime at 3391 feet and bottomed at 3397 feet, where it flowed 60 barrels oil after standing 6 hours. The test is 5 miles north of a shallow gas field and 10 miles northwest of the old Crystal oil field. Barber and Union with John Johnson of Mt. Pleasant drilled the discovery and have 900 acres in the play. Sohio Petroleum Company and Sun Oil Company have spreads in the area.

Ogemaw County: Muskegon Development Company's State C-1, NW SW NE 29-24n-2e, Rose City field, logged a possible commercial pay in the Sylvania at 5160 feet. Sylvania was tentatively reported at 5138 feet. This well showed 1100 feet of fluid in 72 hours and made a bailer of water per hour from an uncertain point. Operators plan to swab several days and acidize.

State C-1 is the first well in the pool to test Sylvania. Chief producing horizon developed is the Richfield dolomite between 4000 and 4250 feet.

Gratiot County: Arthur Williams'

Cook 1, SW SE SW 14-9nl-1w, rated a discovery 3 weeks ago, when it pumped and flowed 60 barrels of oil from the Traverse lime at 2338 feet, was deepened after it started to cut a large volume of water. At 2516 feet, in the Lower Traverse, the well carried a hole full of water and drilling was halted for probable abandonment.

Huron County: C. W. Teater's Ignash 1, SE SE SE 21-18n-13e, first completed in March this year for a discovery but later abandoned as non-commercial, has been reworked and returned to production at an average rate of 22 barrels of oil per day. It is producing from the Monroe at 2856-60 feet.

☆ Illinois Basin

Kentucky Has Strikes In Clinton, Union Counties

Kentucky has discoveries in Clinton and Union counties; discovery registered near Springerton pool discovery, Hamilton County, Illinois; pool opened in Clay County; Richland County gets big producer.

Kentucky

Juist and Company's Luther Hay 1, C-53, rank wildcat 6 miles northwest of Albany, Clinton County, started flowing when the drill entered Trenton lime at 1055 feet and moved down to 1062 feet. The well caught fire and at last report flames were shooting 200 feet above the hole, which was flowing 1500 barrels daily.

Union County: Ryan Oil Company's Greenwell 1, 17-P-20, a mile east of the Uniontown pool, yielded 690 feet of oil and 250 feet of oil-cut mud during a drill-stem test of Cypress sand at 2338-50 feet. Operator is waiting on cement.

Illinois

J. W. Rudy's Musgrove 1, NE SE SW 14-5s-7e, ¼-mile southwest of the Springerton pool discovery well, Hamilton County, is a discovery in the Aux Vases sand. Pay was encountered at 3282-3320 feet. Operator is waiting on cement.

Clay County: J. J. Lynn and The Pure Oil Company's Goings 1, NE NE SW 24-3n-7e, 1½ miles from Clay City pool production, has opened a new pool with McClosky lime production. During a drill-stem test at 3028-36 feet, the well made gas in 2 minutes and flowed oil in 11 minutes. Operator is preparing to drill plug.

Richland County: Largest new producer in Illinois in several weeks is Cooperative Refinery Association's Ede 1, NE SE NW 7-2n-10e, Calhoun area. When plug was drilled to McClosky lime at 3112-27 feet, the well flowed 30 barrels per hour natural. After 5000 gallons of acid, the well flowed 176 barrels the first hour, 100 barrels per hour for 8 hours, and then made 1350 barrels in the first regular 24-hour test, flowing. Well was producing through 1/16-inch choke.

Coles County: The Mattoon pool, discovered 6 years ago, but practically dormant until the past few months, is fast developing into one of the busiest areas in the state and may eventually prove one of the state's top pools.

Newest boost for the pool was at J. A. Kull's Craig 1, a west extension for the north end of the field. Well is expected to make more than 200 barrels daily from Aux Vases sand. The well is 33 feet structurally higher than the nearest producer to the east.

The Carter Oil Company, which had the pool's lone producer for more than 3 years, is drilling Ganley 1, SW NW NW 2-11n-7e, east offset to a recent extension well, and has staked Tyman Estate 1, SWC 25-12n-7e.

Other important tests under way in the area are Homer Luttrell's Miller 1, NE SW SW 3-11n-7e, ¾-mile southwest of nearest production, and E. P. Jarvis' Armantrout 1, SW NE SE 26-12n-7e, approximately midway between production of the north and south areas of the pool.

☆ California

Drilling Activity Brisk; Bandini Deep Well Tested

Notices of intention to drill new wells have shown no decline since V-J Day; Bandini Petroleum halts drilling at 11,000 feet in Bacon Hills wildcat to test showings; Superior extends Lanare field 1 mile southeast; Ohio wildcat likely to open new field in Los Angeles Basin if operator can overcome perplexing water problem.

There is little evidence to date of any decline in California drilling activity since V-J Day. Notices of intention to drill new wells filed with the State Divi-

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sion of Oil and Gas last week were about on a par with the weekly average for the first 6 months of this year and total notices filed to date continue to exceed last year's total in the same ratio as existed before V-J Day. New drillings to date this year total 1591 against 1541 on the same date last year.

Kern County: Bandini Petroleum Corporation halted drilling in Bacon 1, Bacon Hills area, 27-28s-20e, to make a formation test of showings between 10,499 and 10,938 feet. With tester open 1 hour and 40 minutes, recovery was 1890 feet of gassy, oily mud and 7890 feet of salt water. Plug was set at 10,900 feet and a test is to be made at 10,831-10,896 feet. Should this test fail the liner will be drilled up and the well deepened.

Standard Oil Company of California is about to bring in its first 2 wells from the recently discovered Anderson sand in the Cymric field. Weston 34-26 and Weston 44-26 in 26-29s-21e showed up well on tests. Standard has 2 additional projects ready to start on Sept. 26 and Union Oil Company has 2. Standard is also working on a wildcat about a mile east of the Cymric field which is drilling below 4900 feet.

Fresno Conuty: The Superior Oil Company has extended the Lanare field a mile southeast in Sample 81-25, 25-17s-18e. A series of tests have produced varying quantities of 32-gravity oil and a 200-barrel well is a probability.

Madera County: Continental Oil Company and Western Gulf Oil Company have taken over The Pure Oil Company's Chowchilla 1, 7-10s-14e, which Pure drilled to 8402 feet, and are preparing to test upper gas sands.

San Luis Obispo County: Southern California Petroleum Corporation has taken over the properties of Adams Oil Company in the Edna field, consisting of 22 wells. Half the wells, all of which are shallow, are understood to be in line for redrilling with a number of grass roots jobs under consideration.

Los Angeles County: Outcome of The Ohio Oil Company's well-regarded wildcat in the Gardena area continues to remain in doubt. The well, Gardena Community 1 in 24-3s-14w, tested wet a week ago, subsequently was recemented, and currently is trying to shut off water. The well originally flowed some oil and if the operator can solve the water problem a new oil discovery is indicated. Total depth of the well is 10,594 feet. To date, only minor production has been obtained from this depth in the Los Angeles Basin.

Standard of California's deep wildcat, Lewis-Community 1 in the Leffingwell area, between Santa Fe Springs and West Coyote, continued to core during the last week but presently is changing drill pipe after drilling to 10,457 feet.

California Flyers, Inc., a group from the aviation industry, has entered the Rosecrans field with the intention of deepening an old well of St. Anthony Oil Company, Gordon 3, to 10,000 feet.

Washington

Standard of California's first exploratory well in the Pacific Northwest will be started about November 1, President H. D. Collier said in his quarterly statement to stockholders. The well, to be known as Ferndale Community 11-61, will be carried to 7000 feet. The location is only 6 miles south of the Canadian border and two miles inland from Birch Bay, between the towns of Blaine and Ferndale. Collier said that exploration had resulted in leases on 25 square miles of lands in Whatcom County, north of Seattle.

☆ Canada

Madison Limestone Strike Likely on Hay Lake Dome

A Madison limestone oil discovery is indicated at Admiral Oils and British Dominion 1, lsd 7 22-1-17w4, on the Hay Lake Dome about 4½ miles north of the Montana-Alberta boundary, and 23 miles north of the Cut Bank and West Kevin oil and gas fields of Montana. The discovery is about eight miles west and north of the small Red Coulee field on the international boundary.

Admiral and British Dominion reached the Madison at 3088 feet, 56.5 feet higher than the seismograph-indicated depth, broke into porous limestone at 3093 feet, and halted at 3094 feet for a test. A drill-stem test through 4½-inch pipe gave a 330-foot rise in 1 hour, the column consisting of 300 feet of 28-gravity oil and 30 feet of mud. No formation water was indicated. Seven-inch casing has been set at 3089 feet. The well will be acidized and tested at present depth and may be deepened into the porous zone if commercial production is not obtained.

Imperial Oil Ltd., Standard Oil Company (New Jersey) and Standard Oil Company of California have joined forces to develop the Chin Coulee-Tempest area, on the South Plains west of the Taber oil fields. Merged for the project are the bulk of rights in Twp. 9 Rges. 18 and 19w4, formerly divided by the 2 concerns. Just announced, the joint project actually got nuder way last April. Two unsuccessful wildcats, Imperial-Tempest 2 (lsd 3 24-9-19w4) and Imperial-Chin 1 (lsd 4 8-9-18w4), have been completed.

The third joint venture, Imperial-Chin 2, lsd 4 15-9-18w4, is now being drilled with encouraging results. On the indicated high of the Chin Coulee nose, the well has encountered an estimated 3 to 4 million cubic feet daily gas flow in the Taber, Lower Cretaceous sand which yields 18- to 24-gravity oil in the Taber oil fields 6 miles east. Chin 2 is being deepened to the Madison, likely will be followed by a fourth joint test, seeking oil in the Taber sand down the flank of the Chin Coulee nose.

California-Standard, continuing efforts to track down an Ellis sand pinch-out east of the Wrentham area Madison high, has started Wrentham-Province 3, wildcat in lsd 13 13-6-17w4. The well is 2 miles north and ¾ mile east of Wrentham-Province 1 (drilled on the Madison high with no Ellis present); and is a mile north and ¾ mile west of Wrentham-Province 2 (just abandoned, after encountering a narrow Ellis section, and a water-free oil showing in the Madison). The Conrad field, whose north end is 8 miles east and a mile south of the new wildcat, is producing from an Ellis sand pinch-out down the east flank of another limestone high. This field is on the South Alberta Plains, 30 miles north of the Montana boundary.

ARKANSAS WILDCAT

Ouachita County—Oil Discovery: McAlester Fuel Oil Co.'s Chas. Wesson 1, c ne ne sw 24-15s-19w, pay 2646-76, James li 2860 ft, perf 72 shots 2648-80 ft, flow 96 bbls, ⅛-in, gor 250/1, td 2954 ft.

CALIFORNIA OUTPOST

Fresno County—Lanare Extension: Superior's Sample 81-25, 25-17s-18e, flow 136 bbls, 32-gr, 8/64-in ch, td 8532 ft.

ILLINOIS WILDCATS

Clay County—Failures: Gulf's Colclasure 1, se sw nw 12-4n-5e, abnd 2748 ft.

B. E. Thompson's Reynolds 1, nw ne sw 36-4n-6w, abnd 2690 ft.

Franklin County—Failure: Nat'l Assoc. Pet.'s Ben Coal 1, nw ne se 16-5s-2e, abnd 2848 ft.

Jefferson County—Failure: Magnolia's Moss 1, ne sw ne 12-2s-2e, abnd 2800 ft.

Jefferson County—Oil Discovery: Superior's Schallert 1, se se se 18-1s-2e, Aux Vases 2155-64 ft, O'Hara 2234-36 ft, flow 200 bbls, td 2351 ft.

Wabash County—Oil Discovery: C. E. Skiles et al's Kolb 1, se se sw 6-1s-12w, McCl 2475-92 ft, pump 60 bbls, td 2497 ft.

Washington County—Failures: Inland Oil's Lichtenfels 1, sw sw se 22-1s-3w, abnd 2808 ft.

E. J. Reuwaldt's Raichman 1, ne nw nw 1-2s-1w, abnd 2239 ft.

Wayne County—Oil Discovery: Texas Co.'s Bowyer 1, se se nw 34-1s-5e, Aux Vases 2974-81 ft, pump 41 bbls, td 2981 ft.

Wayne County—Failures: C. A. Lynch et al's Fuhrer 1, ne nw ne 34-2s-6e, abnd 3467 ft.

H. Luttrell et al's Stofer 1, nw nw se 22-2n-5e, abnd 2999 ft.

White County—Oil Discovery: J. S. Lynn & Pure's Sillman 1, nw nw se 36-5s-8e, Hards 2632-40 ft, pump 131 bbls, td 3262 ft.

INDIANA WILDCAT

Posey County—Oil Discovery: Texas Co.'s Larkin 1, ne ne sw 16-6s-14w, McCl 2811-14 ft, pump 48 bbls, td 2981 ft.

KANSAS WILDCATS

Dickinson County—Failure: Transwestern's Schlesner 1, sw sw nw 29-15s-4e, Lans 1720 ft, Miss 2307 ft, Hunt 2558 ft, Vi 2842 ft, Arb 3031 ft, abnd 3049 ft.

Pawnee County—Failure: J. M. Huber Corp. et al's Singer 1, nw nw se 5-20s-17w, Cong 3930 ft, Arb 3962 ft, abnd 4002 ft.

Sedgwick County—Oil Discovery: British-American's Petrie 2, nw sw sw 36-26s-1w, Simp 3387-92 ft, pump 417 bbls 44-gr, td 3392 ft.

Stafford County—Failure: J. J. Lynn's Wilson 1, swc 5-25s-14w, Lans 3757 ft, Miss 4178 ft, Vi 4319 ft, Simp 4377 ft, Arb 4380 ft, abnd 4446 ft.

Sumner County—Failure: Fidelity Royalty Co.'s Carson 1, sw nw sw 12-35s-1e, Lay 2845 ft, Miss 3480 ft, abnd 3735 ft.

Thomas County—Failure: Texas Co.'s McArthur 1, se ne sw 18-8s-36w, Miss 4896 ft, Arb 5263 ft, abnd 5372 ft.

KENTUCKY WILDCATS

Butler County—Failure: H. P. Maier et al's Grubbs 1, 9-J-33, abnd 1855 ft.

Henderson County—Failures: Cherry & Kidd's Pritchett 1, 19-O-24, abnd 2600 ft.

R. O. Gould Co.'s Jones 1, 9-P-22, abnd 2701 ft.

MICHIGAN WILDCATS

Alpena County—Failure: Sohio's Turtle Lake 1, se nw ne 9-29n-5e, Monroe 1650 ft, so 2045 ft, abnd 2643 ft.

Clinton County—Failure: Allegan Pipe & Supply Co.'s Whittaker 1, sw sw ne 22-8n-4w, Dundee 2916 ft, abnd 2941 ft.

Gladwin County—Failure: H. Ed. Bell's State 1, se nw se 36-20n-2e, Dundee 3018 ft, abnd 3116 ft.

Midland County—Failures: Ashby Drlg. Co.'s Ames 1, sw sw se 36-14n-2e, abnd 4401 ft.

H. E. Walton's Crane 1, se se se 1-16n-2e, Dundee 3386 ft, abnd 3565 ft.

Missaukee County—Failure: L. R. Reese's State 1, nw nw ne 19-23n-7w, Dundee 3680 ft, abnd 3833 ft.

Newaygo County—Failure: E. L. Bourret's Pletcher 1, nw nw nw, abnd 2170 ft.

Osceola County—Failure: Gordon-Sohio's Travis 1, se se nw 19-19n-8w, abnd 4232 ft.

Ottawa County—Failure: J. W. Lang Co.'s Grothers 1, nw nw se 35-6n-16w, abnd 740 ft.

MISSISSIPPI WILDCATS

Jasper County—Failure: Angle & Angle's George McCollum 1, c nw se nw 15-2n-10e, Tuscaloosa 6111 ft, Massive sd 7176 ft, abnd 7237 ft.

Marion County—Failure: Gulf's E. H. Bradshaw 5, nec 28-3n-17w, Eutaw 5672 ft, abnd 6828 ft.

Stone County—Failure: Superior's Wilbe Lbr. Co. 1, se se 20-3s-10w, Eutaw 6908 ft, Tuscaloosa 6967 ft, Massive sd 8271 ft, abnd 8805 ft.

Tate County—Failure: C. Porter Johnson's B. F. Pritchard Est. 1, nec nw 28-4s-7w, Eutaw 2797 ft, abnd 3165 ft.

MISSISSIPPI OUTPOST

Lincoln County—Brookhaven Extension: Rosser & Pendleton's W. L. Case 1, sec 8-7n-7e, sw prod, elev 477 ft, flow 241 bbls 37.3-gr, Tuscaloosa perf 10,238-54 ft, top Tuscaloosa 9395 ft, td 10,475 ft.

MISSISSIPPI NEW PAY TEST

Jasper County—W. Heidelberg Discovery: Southport Pet. Co.'s C. C. McDonald 2-A, swc se sw 26-1n-12e, elev 450 ft, flow 55 bbls 23.4-gr, ⅛-in, 39 perfs 6426-36 ft in Massive sd, Eutaw 5139 ft, Tuscaloosa 5797 ft, td 6616 ft.

NEW MEXICO WILDCATS

Eddy County—Failure: A. J. Hardendorf et al's State-Texas Gulf 1, c ne ne 2-19s-30e, elev 3521 ft, salt 680-1860 ft, Yates 2100 ft, Red sand 3125 ft, abnd 3310 ft.

Santa Fe County—Failure: E. S. Adkins Bashor 1, sw nw nw 23-12n-11e, 990 fr nl, 330 fr wl, abnd in granite 977 ft.

OKLAHOMA WILDCATS

Bryan County—Failure: A. G. Hill's Stuart 1, ne se nw 15-5s-11e, abnd 3355 ft.

Canadian County—Failure: Fox & Fox's Simpson 1, se se sw 9-14n-5w, abnd 8280 ft.

Cleveland County—Failure: Shell's Wantland 1, ne ne 6-9n-2w, abnd, td not released.

Comanche County—Failures: Ashland's Kline 1, ne ne sw 9-1n-9w, Arb 2674 ft, abnd 2736 ft.

Texas Co.'s Markel 1, ne ne ne 28-3n-9w, abnd 7983 ft.

Hughes County—Failure: Four States Oil Co.'s John 1, sw ne 24-9n-11e, Booch 2240 ft, Crom 3507 ft, abnd 3558 ft.

McIntosh County—Failure: L. B. Jackson's Blankenship 1, sw nw 33-10n-13e, abnd 1202 ft.

Okfuskee County—Failure: Big Chief Drlg. Co.'s Kennedy 1, sw se ne 4-10n-9e, Crom 3320 ft, abnd 3350 ft.

Okfuskee County—Gas Discovery: Amerada's Canard 1, se se ne 16-10n-10e, Crom 3291-3408 ft, flow 10,200,000 gas, rp 1299 lbs, td 4878 ft.

Oklahoma County—Oil Discovery: Stanolind's Bednar 1, nw nw sw 23-13n-1e, Clev sd 4637-45 ft, pump 45 bbls 35-gr, td 5879 ft.

Payne County—Oil Discovery: E. P. Halliburton's Drumm 1, nw se se 6-19n-4e, Btvs 3731-38 ft, pump 10 bbls, td 4249 ft.

Seminole County—Failure: Big Chief Drlg. Co. et al's Mathes 1, sw sw nw 24-6n-6e, Crom 2850 ft, abnd 2907 ft.

Stephens County—Failures: Anderson-Prichard's Gentry 1, se se sw 4-1s-5w, abnd 2505 ft.

Skelly's Henry 1, sw sw se 12-2s-5w, abnd 1215 ft.

Washita County—Failure: Texas Co.'s Wolfe 1, nw nw sw 20-9n-20w, abnd 6864 ft.

WEST TEXAS WILDCATS

Andrews County—Failure: Magnolia's Stevens 1, c se se PSL 10, blk A-48, elev 3295 ft, anhy 1710 ft, Yates 2950 ft, Glorietta 5700 ft, Clear Fork 6150 ft, base Permian 8390 ft, Devonian 8870 ft, abnd 8960 ft.

Val Verde County—Failure: J. A. Green et al's Ingram 1, 1480 ewl 1320 fr m/n/nl E.L. Ry. 73, blk S-2, elev 1557 ft, abnd hard flint 2050 ft.

WEST CENTRAL TEXAS WILDCATS

Jones County—Failure: Alder Oil Co.'s Munroe 1, 952 snl 330 wel BBB&C Ry. 98, elev 1683 ft, abnd 4013 ft.

Jones County—Oil Discovery: Crown Central Pet. Corp.'s Stephenson 1, 990 snl 660 wel of n 120-ac of sect 4, J. Winters sur 138, elev 1730 ft, Gunsight 2575 ft, flow 252 bbls 44-gr, ⅝-in, gor 250/1, acidized 1000 gals 2575-79 ft.

Shackelford County—Failure: Eltex, Ltd.'s M. Davis 1, ne ne se T&P Ry. 30, blk 12, elev 1877 ft, Bend 4595 ft, Barnett 4950 ft, Mississippi 5082 ft, Ellenburger 5109 ft, jkd and abnd 5218 ft.

SOUTH CENTRAL TEXAS WILDCATS

Bastrop County—Failure: G. A. Gamble's Chas. Wolf 1, 349 fr nl 554 fr el 44-ac tr 10, Jas. Doyle sur, abnd 1605 ft.

Kerr County—Failure: Phillips' Whitworth 1, 660 out of swc ne sw W. G. Wharton sur 10, abnd 6618 ft.

Val Verde County—Failure: J. A. Green's John Imgram 1, 1480 fr wl 1320 fr nl sect 73 blk S-2, EL RR sur, abnd 2050 ft.

Wilson County—Failure: Quintana Pet. Corp.'s Annie Moore 1-A, 106 s Well 1, 125-ac lse, D. O. Warren Lge, abnd 9176 ft.

SOUTHWEST TEXAS WILDCATS

Duval County Gas Discovery: Edwin B. Cox-Jake L. Hamon's Clara Driscoll 4, 990 fr nl 1650 fr el sect 55, 3120-ac lse, Santa Rosalia Gr, pay 3168 ft, perf 3170-72, 3175-78 ft, gas well, no gge, ¾-in, tp 880 lbs, cp 1050 lbs, td 3226 ft.

Duval County—Failure: Parker & McCune's Miller Rch. Co. 1, 330 fr n&el blk 10 and 257-ac lse, Diego Hinojosa Gr, abnd 4712 ft.

Jim Hogg County—Failure: Harrison & Daubert's Guiterrez 1, 330 fr n&el 80-ac lse, TT RR sur 163, abnd 3798 ft.

McMullen County—Failure: Fred W. Shield's W. D. Glasscock 1, 330 fr wl 428 fr nl 320-ac lse, M. F. Lowe sur 16, Wilcox 7316 ft, abnd 8011 ft.

LOWER TEXAS COAST WILDCATS

Calhoun County—Failure: P. R. Rutherford's Thos. P. Traylor 1, 467 fr se&swl 343.8-

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■ Financial aid is wanted to drill an 8500 foot well in Leon County, Texas. Address: Box 29, c/o The Oil Weekly, Houston, Texas.

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■ Wanted by a consulting geophysical organization: Petroleum Engineers with Hayward Mud-logging experience or its equivalent. Immediate openings in Venezuela. Excellent opportunity for advancement to managerial positions throughout the world. Address: Box 45, c/o The Oil Weekly, Houston, Texas.

■ GEOLOGICAL MAP DRAFTSMEN. Several openings for men with proper qualifications. Must be excellent freehand letterers. Geological knowledge unnecessary. Submit details of education, experience, and samples of freehand lettering. Reply Geological Department, P. O. Box 1650, Tulsa 2, Oklahoma.

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■ Large independent producing company has openings in seismograph department for Party Chief, Observer, Shooter, Wireman, Geological Draftsman, Electronic-Shopman. Give full particulars, education, progressive experience, age, family status, condition of health, and salary desired. Communications confidential. Members of our own organization know of this advertisement. Address: Box 23, c/o The Oil Weekly, Houston, Texas.

WANTED TO BUY

■ WANTED TO BUY: Waukesha Engine, Model N, size 4½ x 5¾, Date 1919. Address: Box 831, Coleman, Texas.

■ WANTED: 1 Wilson Giant or Mogul Draw-works with engine, in A-1 condition. J. L. Myers & Sons, 5306 Hines Blvd., Phone Logan 6-5238, Dallas, Texas.

SITUATIONS WANTED

■ Seismic Party Chief, with over ten years experience in geophysics, wishes to associate with small company in the field of geophysics, geology, and engineering. Permanent location (preferably in or near Gulf Coast Area) a prerequisite. Require $6000 minimum salary and an assurance of permanency of position. Address: Box 24, c/o The Oil Weekly, Houston, Texas.

■ Geologist—Petroleum Engineer — Fifteen years experience, desires position with independent company. Address: Box 27, c/o The Oil Weekly, Houston, Texas.

POSITIONS WANTED BY SERVICE MEN

■ In the interest of both employers and employes, **The Oil Weekly,** through its Overseas Pony Edition, which is sent free to 6500 former oil men now in the services, has offered to run advertisements from those who will be seeking work once they are discharged. In some cases **The Oil Weekly** has a few more details but, generally speaking, direct correspondence would be advisable. Unless otherwise indicated it may be some time before the person named in the advertisement is available.

■ Wanted work in drilling department, experience with oil field contractors, 4 years' military service Medical Corps, probably available in 6 weeks. Pfc. Wallace Fry, Route No. 2, Talco, Texas.

■ Interested in employment as truck driver in oil fields; experience driving a prime mover with large trailer, caterpillar tractor and drag line, construction foreman with 315th Engineers in Germany. Probable discharge in 60 days. Sgt. Thomas J. Ford, 1714 South 11th St., Waco, Texas.

■ Want foreign duty in oil industry; experience as roustabout, in pipe laying, reading charts and meters. Studied Diesel Engineering and Surveying. Age 28. Have 78 points, expect discharge soon. S/Sgt. Terence P. Lock, 300 Pierce St., Jefferson City, Missouri.

■ Want oil field work in laying and fitting pipe. Experience with 5 companies: pipe laying, fitting pumps, tanks, meters in gas departments, with city water systems, also running casing, pulling rods and tubing. Ex-Seabee. Jess F. Trimble, 901-B Stalker Way, Alameda, California.

■ Foreign oil service, preferably South America, sales experience, want career in oil, will train at own expense if necessary. Age 29. Expect discharge by October. S/Sgt. Chas. M. Vogt, 11 Little St., Matawan, New Jersey.

■ Honorably discharged Coast Guardsman and wife wants overseas jobs. Experience as diesel electric motorman, pipefitter, rotary driller; accounting and general office work, respectively. Lewis Jackson, Box 1232, McCamey, Texas.

■ Want work in oil industry, preferably South America, age 19. Did derrick work for drilling company. J. M. Toliver, TME 3/c, Submarine Repair Unit, Navy 3002, c/o FPO, San Francisco, California.

ADVERTISING RATES

TRADING POST SECTION

Regular classified advertisements for this special section, set in type this size without border, take flat-rate of 7 cents per word for the first insertion and 5 cents per word for each subsequent insertion of same copy. Display advertisements for this section, set in suitably larger type with ruled border, are $5.00 per inch for the first insertion and $4.00 per inch for subsequent insertions. Remittance must accompany copy which should be sent to:

Trading Post Section, The Oil Weekly
P. O. Box 2608 Houston 1, Texas

ac lse, A. Sisneror sur, 2 mi sw Hyser fld, abnd 7143 ft.

Jackson County—Failure: Wright Drlg. Co.'s Fred Westhoff 1, 330 fr s&wl w 80-acs nw 160-acs lot 6, Thos. Menefee sur, abnd 7004 ft.

Jim Wells County—Naylor Gas Discovery: H. M. Naylor Oil Co.'s Lillian Mull 1, 2310 fr el 2970 fr nl 1134.14-ac lse, Los Presenos de Abajo Gr, pay 3974 ft, perf 3974-84 ft, flow 12 mln gas open, no oil, shut in, tp 1030 lbs, td 6400 ft.

Karnes County—Failure: Bennett Bros. Drlg. Co.'s O. A. Mudd 1, 467 fr n&wl 400-ac lse, Carlos Martinez 15-Lge Gr, Burnell-Wilcox area, abnd 6708 ft.

Victoria County—Failure: Hewit & Daugherty's Josephine Mitchell Est. 1, 2750 fr nel 2500 fr sel 2000-ac lse, Placedo Benavides sur, abnd 8008 ft.

UPPER TEXAS COAST WILDCATS

Austin County—New Ulm Oil Discovery: Sinclair Prairie's W. A. Schweke A-1, 800 fr nwl 787 fr sel 2000 fr nel 148.2-ac lse, Jas. Tylee sur, Wilcox pay 9151 ft, perf 9155-65 ft, flow 117.26 bbls 34.6-gr oil, 2% wtr, ¼-in, gor 1509/1, tp 195 lbs, td 10,013 ft, pb 9180 ft.

Chambers County—Oil Discovery: Butcher-Arthur's First Nat. Bnk. of Goose Creek 1, 330 fr nl 330-ac lse, 330 w of road e of well, pay 7181 ft, perf 7181-83 ft, flow 259 bbls 35.5-gr, 10/64-in, gor 1050/1, td 7517 ft.

Matagorda County—Failure: Union of Calif.'s Elsie Richers 1, 691 fr wl 630 fr nl 424.15-ac lse, I&GN sur, 1160 e&s Pan Am's Richers 2, gas well, Hamman deep flk, perf 10,720-44 ft, flow 17 bbls hr, 15% oil, temp abnd 10,927 ft.

Polk County—Failure: Pfiffner & Ryan's Caroline B. Doyle 1, 660 fr nw&nel 27-ac tr 2250 n of Trinity River, Goodrich area, abnd 7510 ft.

Wharton County—Failure: Humble's Mary G. Willis 1, 1980 fr el 1980 fr sl sect 35 660 fr wl 240-ac lse, ET RR sur, n of Daboval fld, abnd 6900 ft.

EAST TEXAS BORDER WILDCATS

Harrison County—Gas-Distillate Discovery: Rogers Lacy's J. M. Tutle et al 1, 1320 fr wl 2600 fr nl 4200-ac lse, J. M. Clifton sur, elev 348 ft, perf 6472-86, 6514-22 ft, acidized, flow 2 mln gas, some dist, ¼-in, td 7027 ft.

Harrison County — Gas Discovery: Rogers Lacy's Mrs. E. L. Poteet 1, 330 n&e of m/sly/swc 85-ac tr, B. Humphries sur, perf 45 shots 6830-42 ft, flow 57 mln gas open fr Rodessa, pay 6795-6833 ft, flow 2 mln gas open fr Travis Peak topped 7358 ft, td 7500 ft.

Marion County — Failure: Frank Hood's Lizzie Handerson 1, 2744 s 2533 w of nec, R. Bennington sur, perf 6665-77 ft, so&g, acidized, no increase; perf 6110-24, 6576-88 ft, swab sw showing o&g, abnd 6738 ft.

Panola County—Failure: Lucas & Collins' G. T. Hudman 1, 5900 fr wl 5450 fr sl Eliz. White sur, Massive 5580 ft, Pettit 6645 ft, Travis Peak 6910 ft, abnd 7070 ft.

EAST TEXAS WILDCATS

Bowie County—Failure: Northern Ordnance's Lumpkin 1, 660 out swc E. J. Edwards sur A-211, elev 291 ft, Pecan chalk 2430 ft, Woodbine 3665 ft, Georgetown 4785 ft, Goodland 4775 ft, Paluxy 4829 ft, Glen Rose 5235 ft, 1st anhyd 6075 ft, Travis Peak 6440 ft, abnd 7021 ft.

Hopkins County—Failure: Magnolia's Beville 1, 1624 snl 330 wel 428-ac lse, Hayden Arnold sur, elev 457 ft, Pecan 2374 ft, Austin 3893-4005 ft, Sub-Clarksville 4015 ft, Woodbine 4533 ft, Georgetown 5275 ft, Paluxy 6399 ft, Glen Rose 6742 ft, massive anhy 7790-7950 ft, Hill 8025 ft, Gloyd 8225 ft, Young 8365 ft, Pittsburg 8565 ft, abnd 8709 ft.

EAST TEXAS NEW PAY TEST

Leon County—Buffalo Deep Failure: Shell-Lone Star's W. L. Tandy 1, 2220 fr swl 2295 fr sel W. Martin sur, elev 391 ft, Woodbine 5590 ft, Georgetown 6160 ft, Goodland 6865 ft, Pettit 9622 ft, Travis Peak 10,084 ft, 100 mln gas open flow, averaging 3 bbls dist, 2 bbls wtr per mln, Woodbine perf 5636-70 ft, td 10,802 ft, pb regular pay at 5791 ft.

NORTH TEXAS WILDCATS

Clay County—Failure: Continental's Stallings 1, 1400 snl 467 wel TE&L Co. sect 3252, elev 1107 ft, Bend 5960 ft, Barnett 6462 ft, Simpson 6756 ft, Ellenburger 6941 ft, abnd 7115 ft.

Cook County—Failure: Benson Bros. et al's J. B. Pace-Whaley 1, 1000 n 300 e of m/w/swc of 762-ac tr, E. Yeaman sur A-173, abnd 2468 ft.

Throckmorton County—Failure: Lion's Daws 1, 1400 ft out swc TE&L Co. sect 1694, elev 1274 ft, Bend 3955 ft, Mississippi 4703 ft, abnd 4985 ft.

Young County—Failure: Lesco's Davis 1, 467 ft out nec w½ sect 63, TE&L Co. elev 1185 ft, Bend 4240 ft, Mississippi 4884 ft, abnd 5080 ft.

NORTH TEXAS NEW PAY TEST

Cooke County—Sivells Bend Deep Discovery: Magnolia's Dillard 1, 330 out swc D. Martin sur A-617, elev 858 ft, flow 189 bbls 36-gr, gor 762/1, in 4 hrs and quit, natural via ½-in, fr Basal Strawn 7400-15 ft.

NORTH TEXAS OUTPOST

Wichita County—Madden Extension: W. H. Hammon-Hanlon & Buchanan's Boone 1, 467 nsl 217 wel blk 29, Parker sbdn, S.P. Ry. 1, A-264, 1⅛ mi w by n prod, elev 1021 ft KMA 4101 ft, flow 1120 bbls 42-gr, gor 200/1, natural via ¾-in, Strawn 4171-4210 ft.

WESTERN CANADA WILDCAT

South Alberta Plains—Wrentham Failure: California-Standard's Wrenthem-Province 2, lsd 16 12-6-17w4th, so in Madison, abnd 3470 ft.

WILDCAT STARTS

ARKANSAS

Union County: R. C. Wallingsford's Wineman 1, c nw sw se 13-18s-13w, lcn.

CALIFORNIA

Kern County: Texas Co.'s Anderson 68-19, 19-29s-21e, Temblor area, lcn.

Colano County: Honolulu Oil Corp.'s Liberty Farms 2, 12-5n-2e, Rio Vista area, lcn.

Sacramento County: Jergins Oil Co.'s Sacramento 1, 23-8n-4e, Sacramento area, lcn.

Tulare County: Winifred Schneider's Pritchett 1, 1-17s-24e, Cottonwood Creek area, lcn.

ILLINOIS

Coles County: William M. Cartwell et al's Twewll 1, ne ne se 32-12n-7e, dr.

Marion County: Geo. H. Engle's Vursell 1, se se nw 12-2n-3e, lcn.

Wabash County: Texas Co.'s Wiseman 1, se ne nw 15-2s-14w, lcn.

Wayne County: Collins Bros.' Meitzher 1, sw se sw 29-1s-9e, lcn.

White County: H. H. Weinert's McEwen 1, nw nw se 3-6s-8e, dr.

KANSAS

Barber County: Alf Landon et al's Hastings 2, nwc 30-30s-14w, lcn.

Cowley County: Kanotex Ref. Co.'s Suttle 1, sw ne 7-34s-3e, dr 120 ft.

Dickinson County: Transwestern's White 1, sec 14-14s-3e, lcn.

Finney County: Wood River Oil Co.'s Steckel-John 1, nw nw se 6-26s-32w, dr 1650 ft.

Graham County: Continental's Jackson 1, ne ne ne 20-6s-25w, lcn.

Marion County: Alpine Oil & Royalty Co.'s Baxter 1, ne nw sw 30-19s-4e, lcn.

McPherson County: Nelson Drlg. Co.'s Sinclair 1, swc 25-19s-1w, lcn.

Pawnee County: J. M. Huber Corp. et al's Floto 1, ne ne se 18-21s-19w, lcn.

Reno County: Derby Oil Co.'s Warfield 1, nec 7-26s-7w, mirt.

Sedgwick County: Pickerell & Lindas' Mayall 1, nw nw sw 11-25s-1e, dr 155 ft.

Beech Aircraft's McLean 1, nw se nw 1-27s-1e, mirt.

Sumner County: E. K. Carey's Johnson 1, c nw ne 32-34s-2e, lcn.

KENTUCKY

Henderson County: Jack Anton et al's Taylor 1, 24-O-32, lcn.

SOUTH LOUISIANA

Beauregard Parish: Sun's Rice Ld. Lbr. Co. 1, 3323 n 2010 w of sec 32-4s-11w, Singer area, 12,000-ft test.

Magnolia's M. J. Witzki 1, 660 n&w of sec nw 22-6s-11w, Oretta area, 9000-ft test.

Iberville Parish: Hamble's Baist Cooperage & Lbr. Co. 1, start nwc sect 92 go sly alg wl 2220 th ely at ra 660 to lcn in 92-10s-13e, Bayou Sorrell area, 12,000-ft test.

Jeff Davis Parish: Sohio's Claudius Fontenot et al 1, 2067 n 668 w of sec of sw 15-10s-6w, 10,800-ft test.

MICHIGAN

Allegan County: P. F. Broughton's Walker 1, ne nw ne 32-1n-14w, lcn.

Arenac County: Sun's Tulloch 1, sw sw se 17-19n-5e, rig.

Crawford County: McClanahan Oil Co.'s Starr 1, ne ne se 30-25n-1w, lcn.

Livingston County: Panhandle Eastern Pipe Line Co.'s Bauer 1, w½ nw nw 25-2n-2e, dr.

Ottawa County: Carl E. Grime's Scott 1, ne nw se 20-5n-15w, lcn.

Clawson Oil Co.'s Van Bronkhorst 1, sw ne sw 29-5n-13w, lcn.

MISSISSIPPI

Kemper County: S. Friedman's J. W. McKelvaine 1, se ne ne 2-9n-17e, lcn.

NEBRASKA

Daviess County: Amerada Oil's Ostermeyer 1, sw ne sw 10-32n-52w, lcn.

NEW MEXICO

Eddy County: Robert E. McKee et al's R. E. Brainard 1-B, c ne se 11-20s-29e, 2000-ft cable test, dr 210 ft.

Harvey E. Yates et al's State-Yates 1, c sw ne 32-18s-30e, 2750-ft cable test, dr 100 ft.

Lea County: Carl B. King et al's Santa Fe Ry. 1, c ne nw 29-9s-37e, 9 mi ne Ranger Lake, 5000-ft San Andres test.

Stanolind et al's State-Mascho Unit 1, c sw sw 31-21s-34e, 4000-ft San Andres test.

OKLAHOMA

Carter County: Sohio's Speake 1, sw se 33-2s-1w, dk.

Garfield County: Atlantic's Schmidt 1, se se sw 25-24n-5w, lcn.

Greer County: Stephens Pet. Co.'s Johnston 1, se se nw 24-5n-21w, dr 180 ft.

Lincoln County: Sunray et al's Potter 1, se se ne 13-14n-4e, dr 925 ft.

Noble County: Renco Oil Co.'s Ryerson 1, nw ne nw 31-20n-1w, lcn.

Okfuskee County: Wood Oil Co.'s Smith 1, se sw ne 23-12n-10e, lcn.

Payne County: Bradley et al's Berg 1, se se se 2-19n-6e, dr 1665 ft.

Seminole County: Jack Villines et al's Atkinson 1, ne ne nw 30-6n-7e, spud.

Stephens County: Stoner & Cummings' Miller 1, se nw ne 20-2s-8w, dr 2248 ft.

WEST TEXAS

Crane County: Gulf's Atlantic Refining-Cordova Union 1, c e¼ of e¼ H&TC Ry. 7, blk 35, offset pumpers on w side McCamey fld, 8500-ft Ellenburger test.

Ector County: Cities Service's J. E. Parker-Wentz 1, c se ne T&P Ry. 20, blk 44, T-2-S, ¾-mi sw Harper fld, 10,500-ft Ellenburger test.

Stanolind and Unit Members' E. B. Kayser 1, c sw sw T&P Ry. 34, blk 43, T-2-S, 1¼ mi sw Foster fld, Ellenburger test.

Pecos County: Childress Roy. Co.'s M. A. Smith-Sinclair 1, 330 ft out sec GC&SF Ry. 41, blk 194, near 400-ft pumpers Tobarg fld, 2000-ft cable test.

Yoakum County: Texas Co.'s W. K. Callahan 1, c nw nw sect 308, blk D, J. H. Gibson sur, 5½ mi nw Plains, mim for 5500-ft San Andres test.

WEST CENTRAL TEXAS

Jones County: West Central Dr. Co.'s J. F. Winters 1, 330 out nwc of e 80-ac of s½ sect 2, J. F. Winters sur 138, sp on 2900-ft cable test.

Stonewall County: A. R. Dillard et al's Fee 1, nw nw sw H&TC Ry. 161, blk 1, 7000-ft Ellenburger test.

SOUTHWEST TEXAS

Duval County: Argo Oil Corp.'s J. E. Murphy 1-C, 667.43 fr wl BS&F sur 112, 320-ac lse, 5 mi ne Seven Sisters, 8000-ft test.

Starr County: W. L. Goldston's Roos & Bennett 1, 330 n of nl sh 101 330 fr el sh 100 porc 93, 2100-ac lse, lcn.

LOWER TEXAS COAST

Goliad County: Santa Clara Oil Co.'s Ida P. Huggins 1, 2889 fr wl 7036 fr nl tr, Maria de Jesus Ybarro Gr, 4500-ft test.

Jackson County: Wirt Franklin Pet. Corp.'s Rose & Sample 1, 534.5 s of RR 330 fr wl 40-ac lse, T. H. P. Heard Lge, spud.

Nueces County: Atlantic's Jas. H. Ewing 1, 1980 fr w&sl sect 46 660 fr nl 219-ac lse, w 219-acs s½ sect 46, M. L. de Herrera Gr, 8500-ft test.

San Patricio County: Chastain, Eaton & Smith's H. G. Ritchie 1, 990 fr w&sl sect 31 D&D sur, 86.99-ac lse, ru 6500-ft test.

UPPER TEXAS COAST

Chambers County: Standard of Tex.'s State of Tex. 1, 660 fr sw&sel sect 292, 640-ac lse, Galveston Bay, ru 11,500-ft test.

Ft. Bend County: Pure's R. F. Ransom 1, 495 fr n&wl 44.6-ac tr of 179.2-ac lse 1075 w of el W. Andrus Lge, 8500-ft test.

Harris County: J. Leonard Davidson-Armee Armstrong's Jos. Meyer 1, 1980 fr el 660 fr sl 640-ac tr of 3510-ac lse, 660 fr sl 1980 fr el G. Aiken sur, 7500-ft test.

Jefferson County: Goldrus Drlg. Co. et al's Edward G. Geheb 1, 467 fr n&el ne 25-ac of 105-ac lse 225 fr sl nw¼ HT&B sur 11, 9000-ft test.

Liberty County: R. Olsen Oil Co.'s J. F. Richardson 1, 330 fr s&wl 136.4-ac lse, John Page sur, 8000-ft test.

NORTH TEXAS

Knox County: Youngblood & Bob Foree's Ross Bates 1, ne ne ne D&W Ry. 3, blk 2, 4500-ft test.

Wichita County: Louis Sikes et al's H. C. Obenhaus-Magnolia 1, 2400 snl 1640 ewl of s½ MEP&P Ry. sur A-230, 2400-ft test.

Wilbarger County: Humble's Ray E. McClintock 1, c se se H&TC Ry. 22, blk 10, 5 mi w Odell fld, 6500-ft Ellenburger test.

Young County: Fain-McGaha Oil Corp.-R. G. Drilling Co.'s L. R. Snider 1, 1733 nsl 330 ewl R. Wilson sur A-1276, 4200-ft Strawn test offset shallow pool.

WESTERN CANADA

South Alberta Plains—Wrentham: California-Standard's Wrentham-Province 3, nw lsd 13 13-6-17w4th, dr.

"Best Bet Yet"

UNIVERSAL TYPE SUCKER ROD WIPER

Designed for all sizes of rods. Cast steel body—Plain or safety cover. Adapted to fit pipe from 2" to 3" reinforced.

Replaceable double seal discs, made from oil resistant PBX synthetic rubber, Patterson-Ballagh's new development.

See Composite Catalog

Patterson-Ballagh SUCKER ROD WIPER

Los Angeles 1 Houston 10 New York 6

SQUEAKS from the BULL WHEEL

Get In Line, Woman

A young wife was visiting her soldier husband in a town near his camp. One night they were walking down the street when along came a curvaceous blonde.

"Hi, Joe," said the blonde.

"Hi, Molly," said the soldier.

The suspicious wife nudged her husband. "Come on, boy, give out. Who's that?"

"Don't bother me with that right now," he groaned. "I'm trying to think of some way to explain YOU to HER."

No Normal Growth

"Say, you, we don't allow traveling salesmen in our village."

"That's why it's still a village."

Happy Go Lucky

Mose sold Andy a horse and swore he was in first-class shape. But on the way home the horse ran headlong into signs and lamp posts and building. Wheeling about, Andy went hunting for Mose.

"You done sold me a blind horse, you crook. He keeps running his head into things."

"Aw, Andy, that horse ain't blind. He just don't give a dern."

Booting 'Em Out

"Why don't you put your feet under the covers?"

"They're so cold I don't want them in bed with me."

This Curious World

Courtesy is the ability to make a guest feel at home when you wish he were.

A certain village has had exactly the same population for 50 years. The reason: Every time a child is born somebody has to leave.

Petting is a method of learning anatomy by the Braille system.

A corespondent in a divorce case is a fellow who wishes half the dirty things he is accused of were true.

Many a man takes his wife along on his travels because she is so homely it's more pleasant to take her along than to kiss her goodbye.

When a woman is in love she goes into ecstasy. When a man is in love he goes into details.

Clever men don't make good husbands because clever men don't become husbands.

Virtue is simply vice at rest.

Bernard Shaw said: "Youth is a wonderful thing. It's a shame it has to be wasted on children."

The penalty for bigamy: Two mothers-in-law.

Farsighted

"Son, you're a lazy bum. Why don't you get up and go to work?"

"No hurry, Pop. When we Communists take over we won't need money."

"Maybe so, but isn't it better you should go to work now and make about $50,000? Then when the revolution comes you can use it to help your cause along."

"Yeah," replied his offspring, "but suppose the revolution doesn't come—then I'm stuck with $50,000."

Temptation

An airplane pilot offered to give a Scotchman and his wife a free ride if they promised not to get scared and yell. "If you holler I'll bring you right down," he warned.

The Scot agreed and they went up and rode for over an hour. After landing, the pilot said, "For your first ride, you certainly kept quiet—not a peep out of you."

McGregor smiled his thanks and admitted: "I come darn near talking once—that was when my wife fell out."

Standco NO-SMOKE

STANDCO BRAKE LINING

for the easiest brake known. It "feeds off" evenly. Standco never scores brake rims. See page 2808 Composite Catalog.

Standco Brake Lining Co.
HOUSTON

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Cold Water StarchGel

- Produces LOWEST FILTRATION LOSSES!
- REDUCES FERMENTATION!
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Contracts accepted for domestic and foreign projects, using the most improved instrumental and interpretative technique
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SHREVEPORT, LOUISIANA

BE SURE TO CHECK THE

TRADING POST SECTION

ON PAGE 96 OF THIS ISSUE

M. G. Gamble has been named general manager of the Standard Oil Company (New Jersey) shipping department, succeeding B. B. Howard, recently elected to the board of directors.

M. G. Gamble

John J. Winterbottom, manager of the marine traffic division who is on leave with the War Shipping Administration, has been named an assistant general manager. **E. H. LeTourneau** continues as an assistant general manager.

As assistant general manager during the war, Gamble helped coordinate operations of the Esso tanker fleet. He was graduated from the Naval Academy in 1915, and after serving aboard the battleship "Utah," was chief engineer and later executive officer on the transport "Hancock" during World War I. He was chief engineer of the presidential yacht "Mayflower" in 1919, and later was transferred to the "U.S.S. Sylph" as commanding officer. During this period he was judge-advocate of general courts martial at the Washington, D. C., navy yard.

Gamble entered the construction and repair division of Jersey Standard's marine department in 1919, and after two years transferred to the operating division. In 1937 he was made assistant in the traffic division and the following year became manager of the Caribbean division. He was named assistant general manager in New York in 1942.

Russell Cobb, W. L. Herring and **Kirk S. White** have opened offices in the Hunt Building, Tulsa, as independent oil operators.

Conrad Senior of Caracas, Venezuela, field foreman for Socony-Vacuum Oil Company, is visiting in the Texas and Louisiana Gulf Coast area, inspecting field operations and equipment.

Dean Collins, service engineer at Tyler for Pittsburgh Equitable Meter Company - Merco Nordstrom Valve Company, has been transferred to Shreveport. The move was made to more centrally locate Collins in his territory, which embraces northeast Texas, North Louisiana and Arkansas.

Dean Collins

Collins has lived in Tyler since 1937, when he joined the company. His Shreveport address is 1101 Janther Place.

Walter C. Beckjord, president of Columbia Engineering Corporation and vice president and director of Columbia Gas & Electric Corporation, has been elected president of Cincinnati Gas & Electric Company. He succeeds **H. C. Blackwell,** who asked the board to accept his request for retirement in accordance with provisions of the company's retirement plan adopted several years ago.

Walter C. Beckjord

Blackwell remains actively with the company. He was elected chairman of the board following the acceptance of his resignation as president.

Beckjord, who was president of the American Gas Association in 1940, has been identified with the utilities industry since 1909.

Alexander Forward, retiring managing director of the American Gas Association, was tendered a testimonial dinner by the executive board of the association in New York City. Forward was formerly a newspaper man and city editor with Virginia daily papers. He served as secretary to the governor of Virginia from 1914 to 1918 and was appointed to the Virginia State Corporation Commission in 1918. After re-election to the commission in November, 1923, he resigned to become chief executive of the gas association on December 15, 1923.

Kenneth Campbell of San Francisco has been named manager of the United States Chamber of Commerce foreign commerce department, effective October 15. The position has been vacant since the resignation of **Edward L. Bacher** several months ago. Campbell goes to the Washington post from San Francisco, where he was manager of the world trade department.

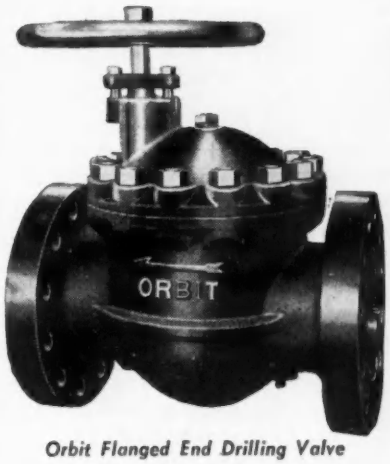
J. N. Green, president of Alabama Gas Company, has been elected a director of the American Gas Association to fill a vacancy caused by the resignation of **H. Carl Wolf,** who becomes managing director of the Association on October 1.

Henry Fink, general manager, Michigan Consolidated Gas Company, was elected a director to fill the unexpired term caused by the death of **John W. Batten,** former president of the Michigan Consolidated Gas Company.

W. K. Esgen is going to Cairo, Egypt, as geologist for Standard Oil Company (New Jersey). He has been associated with **L. V. Manry** at Houston in a consulting capacity. Manry was district geologist for Humble Oil & Refining Company, and also was connected with British American Oil Producing Company before entering the consulting field.

ORBIT VALVES

The ease of operation and quick opening—2½ to 4 turns—of the ORBIT Drilling Valve has made it the number one choice of men in the field. Its dependability and ability to give a positive seat under the severest conditions have made it a must—for safety.



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ORBIT DRILLING VALVES ARE AVAILABLE IN BOTH FULL OPENING AND NOMINAL OPENING SIZES. WITH FLANGED OR SCREWED ENDS.

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See pages 2194 to 2211 in 1944 Composite Catalog

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UNIBOLT
THE ONE BOLT COUPLING

UNIBOLT XMAS TREE FITTINGS

(Compared with flanged fittings)

Weigh a great deal less . . . have a substantially higher safety factor . . . and are easier on your pocketbook.

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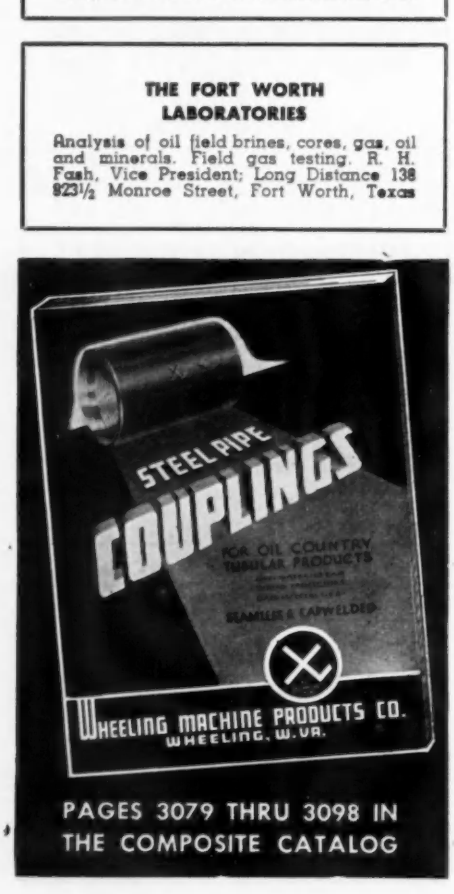
THE FORT WORTH LABORATORIES
Analysis of oil field brines, cores, gas, oil and minerals. Field gas testing. R. H. Fash, Vice President; Long Distance 138 923½ Monroe Street, Fort Worth, Texas



PAGES 3079 THRU 3098 IN THE COMPOSITE CATALOG

MEN IN THE INDUSTRY NEWS

John M. Peirce, economist and tax consultant, has joined the staff of Western Oil and Gas Association. A native Californian, Peirce is a graduate of the University of California and the Harvard Graduate School of Business Administration. He was with the California Taxpayers Association for 11 years and with the California State Chamber of Commerce for five years. He is the author of numerous articles on government, taxation and business economics.

John M. Peirce

Earl Keefer has been made field superintendent for Stanolind Oil & Gas Company at Hastings, Brazoria County, Texas, succeeding **W. G. Leach,** who was transferred to Beaumont as field superintendent of that area. **F. F. Kennedy** is the new field superintendent for Stanolind in the Panhandle district.

J. C. (Jack) Ballagh of the Patterson-Ballagh Corporation is in Houston on an extended tour of the southwest oil region.

R. C. Stoner has been elected chairman of the board of the Richmond Petroleum Company of California. **Norman Hardy** was elected president.

W. V. Hanley has been named assistant manager of the aviation division of Standard Oil Company of California.

Sam L. Olsen of Lane-Texas Company discussed "Drilling for Industry" before the Houston Geological Society September 20.

Frederick Bush, chief geologist for Sinclair Oil Corporation, New York, has completed an inspection of Alberta oil development for his company.

Capt. William A. Landreth, vice president of Landreth Company, Fort Worth, has been awarded the Bronze Star Medal for meritorious service in Italy from June 15, 1944, to December 31, 1944. He is the son of **Ed A. Landreth,** pioneer West Texas operator, and is now at Naples, Italy, awaiting transportation to the United States. He was commissioned a second lieutenant in 1942.

Sam C. Oliphant of Tulsa is the new division engineer of Stanolind Oil & Gas Company with headquarters in Houston. He succeeds **H. L. Olson,** who has been transferred to Tulsa as district superintendent in Kansas.

William C. Van Cleaf has been appointed director for industrial relations for Allis-Chalmers Manufacturing Company.

Prior to his appointment, Van Cleaf served as assistant to **Lee H. Hill,** former head of industrial relations who resigned to become a publisher for the McGraw-Hill Publishing Company.

Van Cleaf joined Allis-Chalmers in 1912 as an electrical apprentice. Later, he was promoted to assistant foreman on the electrical test floor.

Appointed general supervisor of apprentice training, he was soon made company employment manager. With reorganization of the industrial relations division, Van Cleaf was made assistant to Hill.

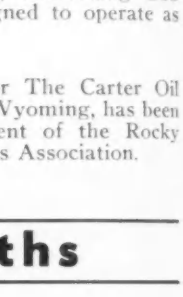
William C. Van Cleaf

C. A. (Bill) Urice, formerly with Fain Drilling Company, has been appointed superintendent of the J. R. Sharp Drilling Company with headquarters at Midland, Texas, succeeding **Bob Franklin,** who resigned to operate as an independent.

Bert Brush, scout for The Carter Oil Company, Casper, Wyoming, has been elected vice president of the Rocky Mountain Oil Scouts Association.

Deaths

L. B. Jackson, Tulsa oil operator and first president of the International Petroleum Exposition, died September 17. Jackson, 69, was born in Iowa and went to Oklahoma in 1904. In the first election after statehood he was named Creek County attorney. After completing his term he entered the oil business and was known as a conservative and successful operator. He and his associates helped to develop many pools in Oklahoma and Texas and had large holdings in the East Texas field. In 1944 he was named chairman of the board of the First National Bank and Trust Company, Oklahoma City.


L. B. Jackson

J. W. France of Corpus Christi, head of a pipe line construction company, was fatally injured September 18 in an auto crash.

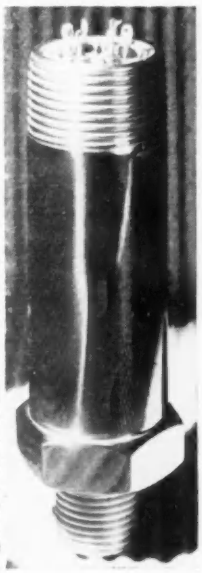
1—Shale Bit

George E. Failing Supply Company, Enid, Oklahoma, and Houston, has introduced an addition to its line of bits, known as the three-wing shale bit. This bit was designed particularly for drilling sticky shale where the formations have a tendency to ball up on the bit, blocking circulation and reducing drilling speed.

It is claimed that under severe drilling conditions the three-wing bits cuts evenly, materially decreasing shock loads and affording stabilized and smoother drilling operations, with the added assurance of a straighter hole.

2—Pressure Sensitive Device

The Baldwin Locomotive Works, Eddystone, Pennsylvania, has developed a pressure sensitive device utilizing the principle that the electrical characteristics of a wire filament change with a physical strain. The instrument, called the SR-4 Pressure Sensitive Device is used to convert gas or liquid pressure to electrical energy for measuring, recording or controlling. It is claimed that its extreme accuracy, ¼ of 1 percent of full scale having been consistently obtained, will mean that the device can be used for control operations that heretofore have not been possible. It is available in several ranges up to 20,000 pounds per square inch.

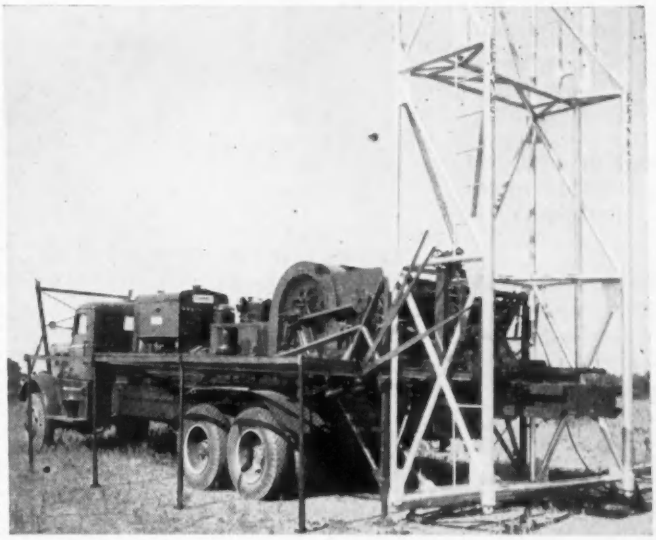


Since it is essentially an electronic device, it is said that it will enable results to be transmitted long distances whether for direct reading, recording or control.

The heart of the device is a fine filament wire bonded to a hollow metal core against which is exerted the gas or liquid pressure to be measured. As the pressure increases, this filament stretches, thus changing the diameter of the wire and causing measurable changes in the electrical resistance of the wire. This change in resistance varies the amount of current flowing through the filament circuit and, when amplified, these changes show up on the dial or are used to actuate a control system.

3—Drilling Unit

Franks Manufacturing Corporation, Tulsa, has perfected its Model 5000-L truck mounted rotary drilling unit, designed for flexibility and adaptability. Rated capacity of the outfit is from 4000 feet of 4½-inch drill pipe to 5000 feet of 3½-inch drill pipe.



The unit includes draw works, regular automatic and friction spinning catheads; two-engine power plant with hydraulic couplings and four-speed transmissions; "V"-belt compounding so that the power of either or both engines may be utilized on any drive; friction engaged pump drive; propeller shaft rotary table with master bushing; four-speed table transmission; tubular steel derrick with stacking board; five-sheave ball bearing mounter crown block; power screw raising device; swivel, kelly, kelly bushing, and standard drill pipe slips, all unitized and mounted on a special truck for maximum mobility and economy of operation.

The power plant group consists of two HB-600 Cummins full Diesel engines of 15-maximum rated horsepower. These engines are of the four-cycle full-Diesel, solid injection type, having a bore of 4⅞-inch, and a stroke of six inches to give a displacement of 672 cubic inches. Engine equipment includes oil bath air cleaner, lube oil filter, and electric starter and generator, ammeter, battery, governor, water temperature indicator, by-pass thermostat, and fuel oil filter. HBS-600 Cummins supercharged for greater power development is optional.

4—Gate Valve

Darling Valve & Manufacturing Company, Williamsport, Pennsylvania, announces two new lines of rubber-lined gate valves and swing check valves. The valves are available in inside screw and outside screw and yoke types, lined with hard rubber and are recommended for many corrosive or abrasive services. Motor operated, quick-opening and cylinder-operated types also can be supplied with rubber lining.

The fully revolving double disc feature of this gate valve is said to assure maximum life to the rubber lining under the most exacting service conditions. The plain "no-pocket" discs are said to prevent accumulation of solids from materials in the valves. Suitable corrosion

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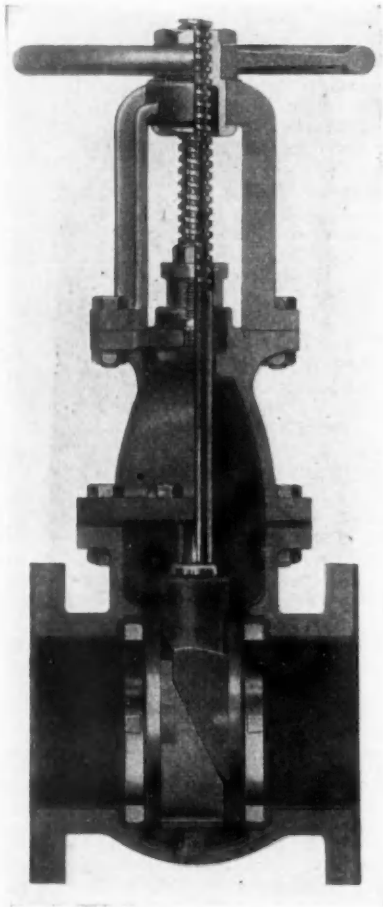
NEW EQUIPMENT . . . LITERATURE

resistant alloys are incorporated in stems, wedges, discs and seat rings.

Valve seats are parallel, discs fully revolving through 360 degrees, so they seat in a different position each time the valve is operated. Wear on discs and seats is uniform, insuring long life and drop-tight closure. The upper wedge is made with radius face to provide a line contact with the straight-faced lower wedge and faces are transversely beveled, insuring both vertical and horizontal equalization of wedging pressure.



In the swing check type valve, clapper arm, hinge pin, valve disc, stud bolt, nut and washers are made of suitable corrosion resistant alloy assuring free, easy operation of the valve at all times. The hinge pin is held entirely by the bonnet arm and does not extend through the body of the valve.

The clapper arm, supporting the disc, is hung on a pin set back of the seat face, thus imparting a slight initial pressure of the disc against its seat. A few ounces of pressure on the pump side of the valve will immediately unseat the disc, yet the valve remains tight when there is no differential in pressure on either side of the disc. In closing, the top of the disc seats first and the bottom of the disc follows. This design is said to afford a sensitive check, and the resultant "flap" action minimizes closing slam.

When the valve is open, the disc is entirely out of line of flow, reducing friction to a minimum. The fully revolving disc feature permits seating in a different position each time the valve is operated, thus distributing wear uniformly over the entire seating surface. The complete gate assembly is suspended from the bonnet arm and can be lifted out of the body of the valve in one unit by merely unbolting the bonnet. The seat ring screwed into the hard rubber lining of the body can be removed and replaced without removing the valve from the line.

Use the Coupon

For free copies of Manufacturers' Literature or more information on products described on these pages, use the convenient mailing coupon on page 101.

Literature

5—Gaskets

The Steel Improvement & Forge Company, Cleveland, has published Bulletin 45 on Gruv-Seal forged iron and alloy ring gaskets. It is claimed that these gaskets effect a seal that is as permanent as a good weld, and a seal that provides all the conveniences of a joint that can be disassembled and assembled quickly. The bulletin gives all particulars.

6—Inventory Check List

Allis-Chalmers Manufacturing Company, Milwaukee, announces publication of a reconversion inventory check list for electric motors. The list contains standards needed to determine whether motors are in good order, need repair or new parts, will shortly require replacement, or need re-application.

7—Splice

The Manhattan Rubber Manufacturing Division of Raybestos-Manhattan, Passaic, New Jersey, has published a bulletin describing the Manhattan Extensible-Tip Splice for endless belts. The bulletin contains photographs and schematic diagrams describing the splice and cites advantages to be obtained from the use of the tip.

8—Tool Steels

Allegheny Ludlum Steel Corporation, Brackenridge, Pennsylvania, has published an illustrated booklet on "The Tool Steels of Allegheny Ludlum." For the sake of simplicity, these steels are separated into five groups, including high speed steels, hot work steels, shock resisting steels, cold work steels, and carbon and low alloy tool steels. Each group is discussed. Then follows chapters on finder, applications, mill forms, drill rods, tool bits, high speed forgings, smooth hammered forgings, cast-to-shape, composition, working, tables and index.

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Beaumont Iron Works Bought By American Locomotive Firm

The Beaumont Iron Works, Beaumont, Texas, manufacturers of the Dreadnaugh line of oil field equipment, has been sold to the American Locomotive Company, subject to approval by the iron works stockholders. American Locomotive Company will take over operations October 20.

No interruption in service is contemplated, and the complete line of products manufactured by Beaumont Iron Works will be continued by American Locomotive Company. Jones & Laughlin Supply Company will continue distribution of the Dreadnaught products.

A. I. Brainard, president of the Beaumont company, said the purchase should mean a substantial expansion for the company.

Bethlehem Supply Builds Craig, Colorado, Warehouse

Bethlehem Supply Company is erecting a central warehouse at Craig, Colorado, from which it will serve oil fields in Western Colorado. H. V. Harder, formerly district manager at Wichita Falls, Texas, has been transferred to Craig as district manager for the Colorado and Wyoming district which will come under the general supervision of V. W. Bailey, division manager, located at Tulsa.

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